

the



catalogue

saws

**hand tools
and engineers' tools**

lathe tools

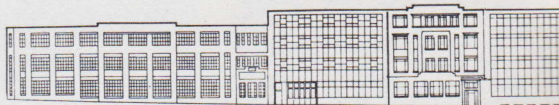
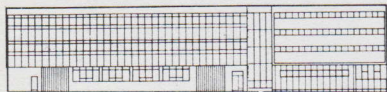
magnetic tools

permanent magnets

**JAMES NEILL & COMPANY (SHEFFIELD) LTD
NAPIER STREET SHEFFIELD S11 8HB ENGLAND**

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The business James Neill & Company (Sheffield) Limited — or ECLIPSE, as the Company is known widely and familiarly — was founded in 1889. Today, wherever tools are used, the brand name ECLIPSE is renowned.

This fame, achieved over the years, and now so firmly established, has as its basis the singleness of purpose of the late James Neill, founder of the Company. That singleness of purpose, was to provide service to industry by manufacturing products of practical design and consistent high quality. The generations that have succeeded James Neill have never deviated from that basic purpose and it is the

reason why ECLIPSE tools are so readily accepted anywhere.

James Neill was an accountant who gave up his career and turned to steelmaking. He rented a twelve-hole coke furnace and began to make steel by the crucible process. Later he made a composite steel (a steel-faced iron) and, with this intimate knowledge of steelmaking turned his attention ultimately to the manufacture of tools.

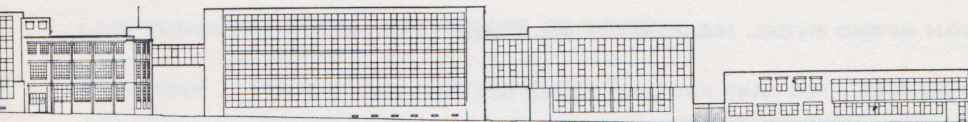
James Neill was a perfectionist and refused to accept anything but the best. He laid down standards that would ensure the highest quality and saw to it that those standards were rigidly observed.

Long before he died in 1930, James Neill saw his policy of consistent high quality and design-for-the-job bear the rich fruits of user confidence.

And so it is at the present time. The policy is firmly rooted, not only in the production of ECLIPSE tools but also in the field of distribution.

Of all the tools in the ECLIPSE range, hacksaw blades have perhaps done more to make the brand name so widely accepted. First produced in 1911, they owe their success to their cutting efficiency and length of life, qualities ensured by use of the finest quality steel and the highest standards of production, strictly controlled at every stage right through to final inspection and packaging.

Today, the steel used in the manufacture of



ECLIPSE hacksaw blades are made in the Company's own high frequency electric melting furnaces and rolled in their own rolling mills. Continuous research facilitates the development of still better blade performance and exhaustive practical testing of blades is undertaken continuously in the works by both skilled and unskilled operators and also on no less than twenty-six hacksaw machines.

It is not unnatural for a manufacturer of hacksaw blades to make the frames in which they can be used. Several patterns of ECLIPSE frame are available.

The manufacture of hacksaw frames led to the designing and marketing of other types of saw and the range now includes saws for cutting sheet material, coping and piercing saws, a general purpose saw that cuts both wood and metal with the same blade, and a variety of other saws and sawing accessories.

A practical range of engineers' hand and precision tools developed during the Second World War makes up an important group of ECLIPSE tools.

The First World War brought about a greatly increased demand for magnets and in response to an urgent Government appeal the Company undertook the manufacture of permanent magnets for magnetos to replace supplies previously obtained from Germany.

Since then, constant research has enabled ECLIPSE to be always able to accommodate new and improved materials and designs to

cater for the rapid advances in radio, television and electronics.

Research and technical know-how led to an important breakthrough in workholding techniques in 1934 when the Company designed and produced the first permanent magnet chuck. After using a loudspeaker magnet to hold a small circular slitting saw during a face grinding operation, it was realised that the method was one of considerable promise if the problem of switching off the magnetic flux could be overcome.

The solution — as simple as it was ingenious — was to provide an alternative path along which the magnetic flux could be diverted without detriment to the magnet.

From this almost accidental beginning, has developed not only a range of permanent magnetic chucks, but also a series of ingenious but simple magnetic devices for workholding and lifting.

Not only has the ECLIPSE range of tools grown to meet the needs of modern industry, but the Company itself has also grown. James Neill started the business more than 75 years ago with 12 men, but today the number of employees with the Company and its subsidiaries is over 3,000. The principal United Kingdom subsidiaries of the Company are: The Hallamshire Steel Company Ltd., Peter Stubs Ltd., and Whiteley, Lang & Neill Ltd., and overseas it has associate manufacturing companies in Australia, South Africa and New Zealand, and subsidiary selling companies in Australia, the U.S.A. and Canada.



HIGH SPEED STEEL HACKSAW BLADES

SINGLE EDGE FOR HAND AND LIGHT POWER USE

Length in inches	Width in inches	Thickness in inches	Teeth per inch	Size No.			
				14 teeth	18 teeth	24 teeth	32 teeth
ALL HARD TYPE							
10	¼	.025	18, 24, 32		H1018	H1024	H1032
12	¼	.025	14, 18, 24, 32	H1214	H1218	H1224	H1232
12	¾	.032	14, 18, 24	H1214-3	H1218-3	H1224-3	
FLEXIBLE TYPE							
10	¼	.025	18, 24, 32		FH1018	FH1024	FH1032
12	¼	.025	14, 18, 24, 32	FH1214	FH1218	FH1224	FH1232

SINGLE EDGE FOR POWER USE

Length in inches	Width in inches	Thickness in inches	Teeth per inch	Size No.			
				4 teeth	6 teeth	10 teeth	14 teeth
12	1	.050	10, 14			H1210-5	H1214-5
14	1	.050	10, 14			H1410-5	H1414-5
14	1¼	.062	6, 10		H1406-6	H1410-6	
14	1½	.075	4, 6	H1404-7	H1406-7		
16	1¼	.062	6, 10		H1606-6	H1610-6	
16	1½	.075	4, 6	H1604-7	H1606-7		
17	1	.050	10, 14			H1710-5	H1714-5
17	1¼	.062	4, 6, 10	H1704-6	H1706-6	H1710-6	
18	1¼	.062	6, 10		H1806-6	H1810-6	
18	1½	.075	4, 6	H1804-7	H1806-7		
18	1¾	.088	4, 6	H1804-8	H1806-8		
21	1½	.075	6		H2106-7		
21	1¾	.088	4, 6	H2104-8	H2106-8		
24	1¾	.088	4, 6	H2404-8	H2406-8		
24	2	.100	4, 6	H2404-0	H2406-0		
30	2½	.100	4	H3004-0			

ECLIPSE hacksaw blades conform to British Standard Specification 1919





LOW TUNGSTEN STEEL HACKSAW BLADES

SINGLE EDGE FOR HAND AND LIGHT POWER USE

Length in inches	Width in inches	Thickness in inches	Teeth per inch	Size No.			
				14 teeth	18 teeth	24 teeth	32 teeth
FLEXIBLE TYPE							
10	½	.025	18, 24, 32		F1018	F1024	F1032
12	½	.025	14, 18, 24, 32	F1214	F1218	F1224	F1232
12	¾	.032	14, 28, 24	F1214-3	F1218-3	F1224-3	
ALL HARD TYPE							
10	½	.025	18, 24, 32		A1018	A1024	A1032
12	½	.025	14, 18, 24, 32	A1214	A1218	A1224	A1232
12	¾	.032	14, 18, 24	A1214-3	A1218-3	A1224-3	

DOUBLE EDGE FOR HAND USE

Length in inches	Width in inches	Thickness in inches	Teeth per inch	
10	1	.032	24	D1024-3
12	1	.032	24	D1224-3

SINGLE EDGE FOR POWER USE

Length in inches	Width in inches	Thickness in inches	Teeth per inch	Size No.	
				10 teeth	14 teeth
12	1	.050	10, 14	A1210-5	A1214-5
14	1	.050	10, 14	A1410-5	A1414-5
14	$1\frac{1}{4}$	.062	10	A1410-6	
16	1	.050	10, 14	A1610-5	A1614-5
16	$1\frac{1}{4}$	.062	10	A1610-6	

ECLIPSE hacksaw blades conform to British Standard Specification 1919



TYPES OF ECLIPSE HACKSAW BLADES

HIGH SPEED STEEL blades provide the best performance obtainable from a hacksaw blade. They not only combine maximum length of life with speed of cutting but also will cut the harder materials which other qualities of hacksaw blade will not tackle. They should, therefore, be used for all sawing where maximum blade life and cutting speed are required, and for the more specialised sawing of alloy steel, heat treated steel and other hard metals. For hand use, they are available in two types, viz.:

ALL HARD type blades, which are the blades for the operator who requires the performance of a High Speed Steel blade and has the experience to obtain full advantage from the rigidity and the exceptional length of life which the All Hard type offers.

FLEXIBLE type blades, which, being hardened on the cutting edge only, are unbreakable in normal use — these are the best blades to use where the performance of a High Speed Steel blade is required but where, because of lack of experience or the awkward nature of the work, blade breakage may prevent full advantage being obtained from the All Hard type.

For light power and heavy power use, High Speed Steel blades are made in the All Hard type only.

LOW TUNGSTEN STEEL blades are intended for the general purpose sawing of mild steel, brass, aluminium, copper and similar metals. For hand and light power use, they are available in two types, viz.:

FLEXIBLE type blades, which, being hardened on the cutting edge only, are unbreakable in normal use and are, therefore, recommended for general use especially by unskilled or semi-skilled operators and where the work cannot be held firmly or is in an awkward position.

ALL HARD type blades, which, being hardened throughout, are more rigid and are preferred by some operators who find the greater rigidity an aid to accurate sawing.

For heavy power use, Low Tungsten Steel blades are made in the All Hard type only.

THE SELECTION AND USE OF HACKSAW BLADES

To obtain the most economical and satisfactory results from ECLIPSE hacksaw blades it is necessary to use the most suitable quality, type and size of blade. A standard size of blade should always be used unless there are exceptional and unusual circumstances which make the use of a special blade essential. A standard size of blade offers an advantage in both price and delivery.

General advice on sawing is dealt with fully in the ECLIPSE instructional booklets, copies of which are available free of charge. Advice on specific sawing problems is always available from the ECLIPSE Technical Liaison Department.



ECLIPSE BANDSAW

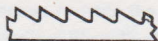
ECLIPSE Bandsaw is produced on the very latest machinery by a Company which is famous throughout the world for the metal cutting saws which it manufactures. Right at the start of production, and at eight later stages, very close control is exercised over quality. The steel from which ECLIPSE bandsaw is manufactured is made to an exact specification, and is thoroughly inspected before production commences. The teeth are milled on machines which provide extreme accuracy of tooth form and pitch which, in turn, enables an accurate set to be applied to the teeth. After milling and setting, the band is heat treated on specially designed equipment which ensures that the ideal balance between hardness and toughness is obtained.



CARBON STEEL METAL CUTTING BANDSAW

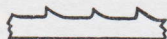
FLEXIBLE

REGULAR TEETH



Size in inches	Teeth per inch			
$\frac{1}{8} \times .025$		14	18	24
$\frac{1}{8} \times .025$		14	18	24
$\frac{1}{4} \times .025$	10	14	18	24
$\frac{3}{8} \times .025$	10	14	18	24
$\frac{1}{2} \times .025$	8	10	14	18
$\frac{1}{2} \times .025$	8	10	14	18
$\frac{3}{4} \times .032$	8	10	14	18
$\frac{3}{4} \times .032$	6	8	10	14
$1 \times .035$	6	8	10	14

SKIP TEETH



Size in inches	Teeth per inch	
$\frac{1}{4} \times .025$		6
$\frac{3}{8} \times .025$	3	6
$\frac{1}{2} \times .025$	3	6
$\frac{3}{4} \times .032$	3	6
$\frac{3}{4} \times .032$	3	
$1 \times .035$	3	4

HOOK TEETH

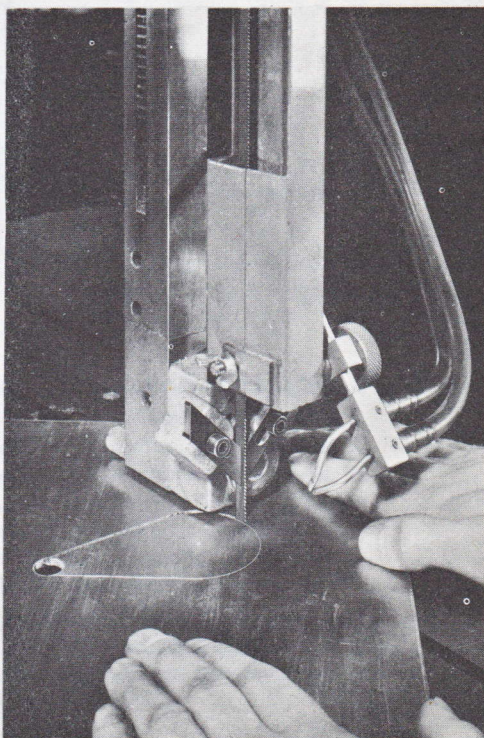


Size in inches	Teeth per inch	
$\frac{1}{4} \times .025$	3	6
$\frac{3}{4} \times .032$	3	6
$1 \times .035$	3	6

EXTRA CUT (hard back)

REGULAR TEETH

Size in inches	Teeth per inch	
$\frac{1}{2} \times .025$	10	14
$\frac{3}{4} \times .032$	10	14
$1 \times .035$	6	10



All teeth are raker set except those marked * which are supplied wavy set. Other bands can be supplied with wavy set on request.

Supplied in 100 ft., 250 ft. and 500 ft. coils or in welded bands to customers' requirements.



TYPES OF ECLIPSE BANDSAW

FLEXIBLE BANDSAW is a high carbon steel band designed to undertake, at minimum cost, all general purpose work and the profile sawing of all but the most difficult-to-machine materials. It is available with regular, skip or hook teeth.

EXTRA CUT BANDSAW is a high carbon steel band suitable for the same type of work as the flexible bandsaw, but, because of the special method of manufacture, having greater tensile strength. This ensures a greater number of more accurate cuts, greater resistance to breakage and the elimination of stretching. By reducing the time lost in retightening, the EXTRA CUT band can save valuable production time. ECLIPSE EXTRA CUT bandsaw is available with the regular tooth form only.

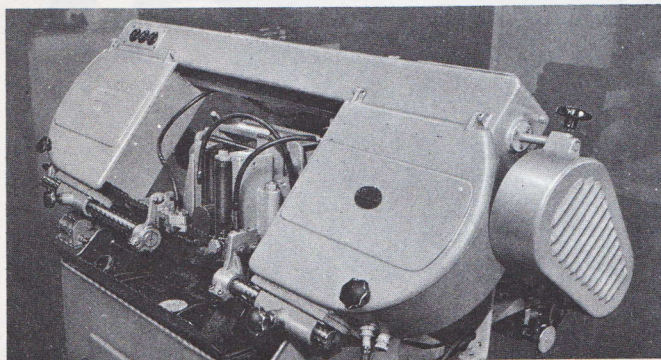
THE SELECTION AND USE OF BANDSAW

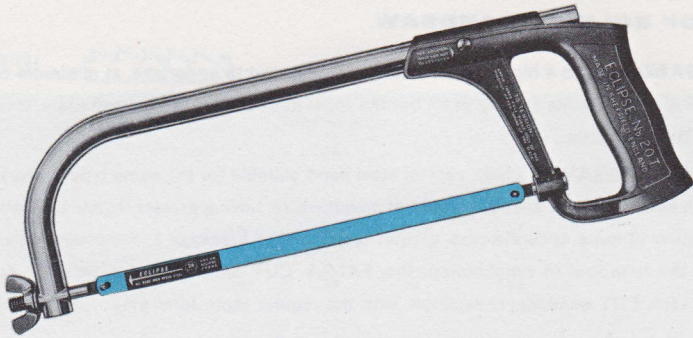
To achieve maximum cutting efficiency and the desired surface finish, it is important that a band with the correct number of teeth is selected (relative to the type and size of material being cut) and that the band is run at the most suitable cutting speed.

Raker set teeth are recommended for cutting relatively thick, solid sections (i.e. over $\frac{1}{4}$ ") and for contour/profile sawing; wavy set teeth are recommended for cutting thin sections (i.e. under $\frac{1}{4}$ ") and also for pipes and tubes.

For cutting ferrous metals and for general purpose sawing, the regular form of tooth is the most suitable; skip and hook teeth are ideal for the sawing of non-ferrous metals.

General advice on the use of bandsaw is dealt with fully in the ECLIPSE instructional booklets, copies of which are available free of charge. Advice on specific sawing problems is always available from the ECLIPSE Technical Liaison Department.





HACKSAW FRAMES

No. 20 T.

An adjustable frame of outstanding design and superlative quality, with the following special features:—

The tubular bow of oval section ensures the perfect combination of rigidity and balance and provides a clear view of the work.

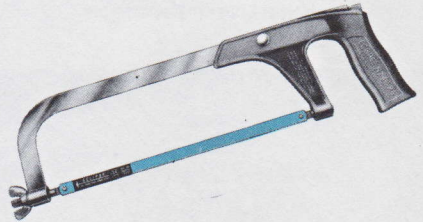
The die-cast handle, unbreakable in use, provides a comfortable and completely guarded grip and directs the pressure at the angle required for maximum efficiency.

Spare blades can be stored in the tubular bow.

A durable and attractive appearance is provided by the bright plating of the bow and tension pieces and by the matt finish of the handle.

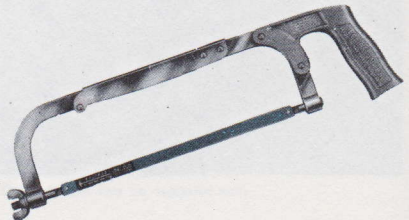
No. 40 P.G.

An adjustable frame of the highest quality, providing strength, rigidity and balance; the bow and tension pieces are heavily plated and the die-cast pistol grip handle has an attractive matt finish.



No. 85

An attractively priced adjustable frame of robust design for general use, with a comfortable die-cast pistol-grip handle.





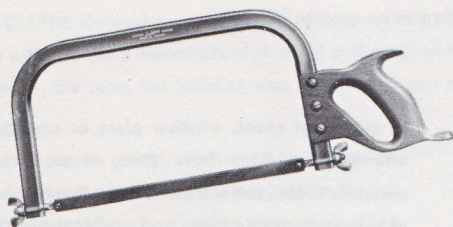
No. 60 B

A sturdy and robust adjustable frame of incomparable value, with a comfortable hardwood handle.



No. 1270

A strong and exceptionally rigid non-adjustable frame with a comfortable hardwood handle.

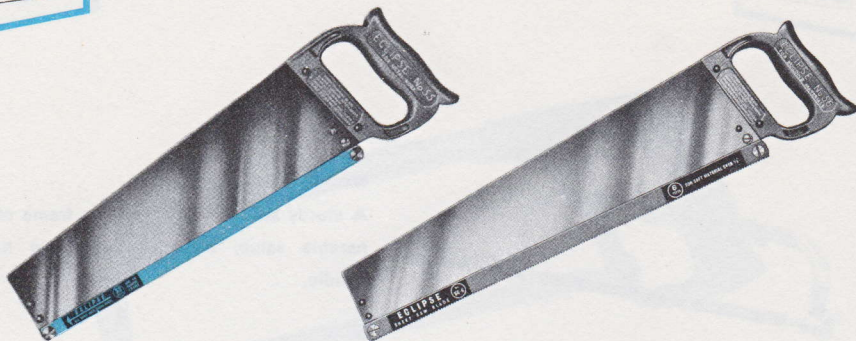


Nos. 90 G and 91 G

Two sizes of saw frame for the sawing of girders and other deep sections, with a comfortable hardwood handle and bow of special oval section tube to provide strength, rigidity, and balance, combined with minimum weight.

Catalogue No.	Capacity	Depth of bow in inches	Blade fitted
20T	10" & 12"	3 $\frac{3}{8}$	10" High Speed Steel
40PG	10" & 12"	3 $\frac{3}{8}$	10" High Speed Steel
85	10" & 12"	3 $\frac{3}{8}$	10" High Speed Steel
60B	10" & 12"	3 $\frac{3}{8}$	10" Low Tungsten Steel
1270	12"	3 $\frac{3}{8}$	12" Low Tungsten Steel
90G	12"	7 $\frac{1}{4}$	12" Low Tungsten Steel
91G	12"	10 $\frac{1}{4}$	12" Low Tungsten Steel

On all ECLIPSE hacksaw frames, the swivelling tension pieces enable the blade to be fitted to cut at right angles to the normal direction of cut — invaluable in difficult positions or where the depth of cut exceeds the depth of the bow.



SHEET SAWS

ECLIPSE Sheet saws are of unique design (U.K. Pat. No. 721074) and will cut all types of sheet material as easily as a joiner's saw will cut plywood. They are made in two patterns; the No. 55 for cutting metal and the No. 56 for cutting building materials. The blade is replaceable; as soon as it wears out, or if a blade of different tooth size is required, a new blade can be quickly fitted.

No. 55 for cutting metal

This saw uses a standard 12" hand hacksaw blade (available, of course, with 14, 18, 24 or 32 teeth per inch); it is supplied with a High Speed Steel blade with 32 teeth per inch. The saw is designed

to cut metal sheet, whether plain or corrugated and whether made from steel, brass, copper, aluminium, etc., and will also cut the thinner sheets of asbestos, plastic, slate and similar materials.

No. 56 for cutting building materials

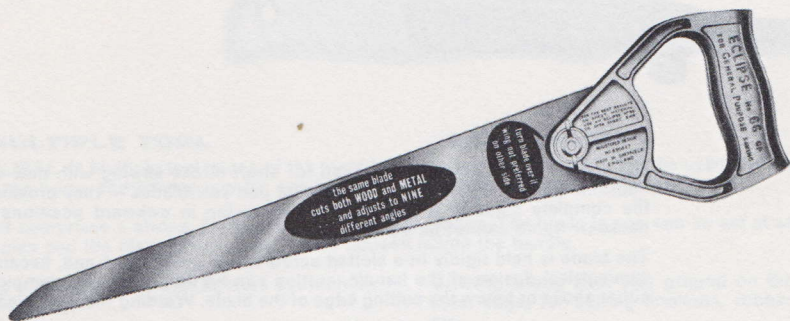
This saw uses a special 16" blade, made from Tungsten Steel and available with 6, 10 or 14 teeth per inch; it is supplied complete with two blades, one with 6 teeth per inch and one with 10 teeth per inch. The saw is designed to cut the thicker sheets and many of the abrasive materials which are used in the building industry — materials, in fact, which cannot be cut by a joiner's saw at all or which, at best, are liable to cause damage or rapid wear to the teeth; these materials include asbestos-

cement, cement-woodwool insulation slabs, thermo-plastic bricks, metal-covered plywood, plastic mouldings, formica, etc.

Spare Blades

Size No.	Teeth per inch	Recommended use
56-6	6	For soft material over $\frac{1}{2}$ "
56-10	10	{ For hard material over $\frac{1}{2}$ "
		{ For all material $\frac{3}{8}$ " to $\frac{1}{2}$ "
56-14	14	For all material $\frac{3}{8}$ " to $\frac{3}{16}$ "

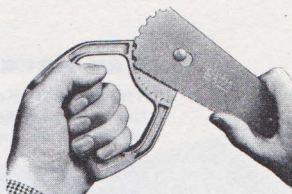
Catalogue No.	Description	Overall length in inches
55	For cutting metal	16 $\frac{1}{4}$
56	For cutting building materials	20 $\frac{1}{2}$



GENERAL PURPOSE SAW

The ECLIPSE General purpose saw is of unique design (Regd. Design No. 890827 and 891263). It is a saw which with the same blade cuts both wood and metal and is invaluable, therefore, for all the odd jobs about the house, the farm, the building site, the garden, and so on.

The blade can be quickly positioned and locked at any one of nine different angles relative to the handle — a feature which makes the saw ideal for cutting materials in awkward positions.



At whatever angle the blade is set, sawing fatigue is reduced to a minimum because of the perfect balance of the saw and the comfortable grip provided by the die-cast handle.

The clamping screw and wing nut cannot be separated and therefore cannot be misplaced or lost.

Spare blades are readily available.

The 16" Tungsten Steel blade with which the saw is fitted (tapered to facilitate sawing in confined spaces) is specially heat treated to ensure that it will cut with ease such materials as hard and soft wood, wood in which nails or bolts are embedded, hard rubber, plastics, fibreboard, as well as mild steel, copper, brass, aluminium and lead in tube or bar form.

Catalogue No.	Overall length in inches	Blade Size No.	Blade dimensions in inches		
			Length	Thickness	Teeth per inch
66	19 1/4	660	16	.050	10



PAD HANDLES

ECLIPSE Pad handles are designed for short stroke sawing with new or broken hacksaw blades, key hole saw blades and pad saw blades — they provide, in fact, the complete solution to the problem of sawing in awkward positions where a hacksaw frame cannot be used.

The blade is held rigidly in a slotted screw with a knurled nut and, because of the symmetrical design of the handle, cutting can be done with the clamping device either above or below the cutting edge of the blade. Warding files can also be held.

Catalogue No.	Description	Length in inches
10	Pad handle — plastic body	5
12	Pad handle — metal die-cast body	5



KEY HOLE SAW BLADE

The ECLIPSE Key hole saw blade is made from Low Tungsten Steel, hardened on the edge only and therefore unbreakable in normal use. It is designed for use in the ECLIPSE pad handle for sawing steel and other metals.

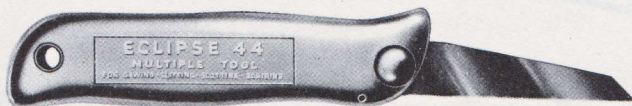
Catalogue No.	Length in inches	Width in inches	Thickness in inches	Teeth per inch
18	7½	½	.032	18



PAD SAW HANDLE

The ECLIPSE Pad saw handle is an improved design of tool for holding pad saws, key hole saws and also hacksaw blades. The clamping screws (with knurled heads and wide slots for easy tightening) are located at one end of a strong steel tube which extends right through the wooden handle, thus ensuring complete rigidity for the blade and ample support for the comfortable hardwood handle. All metal parts are plated.

Catalogue No.	Description	Length in inches
15	Pad saw handle	8



44 MULTIPLE TOOL

The ECLIPSE 44 Multiple tool is one of the most handy and versatile tools. It can be used on innumerable jobs in the home and garage and for engineering, electrical and general maintenance work.

The tool comprises a strong die-cast handle with four blades. The blade in use can be set at any one of four angles and the blades not in use can be housed inside the handle.

Sawing blade (No. 441) with 32 teeth per inch for general sawing.

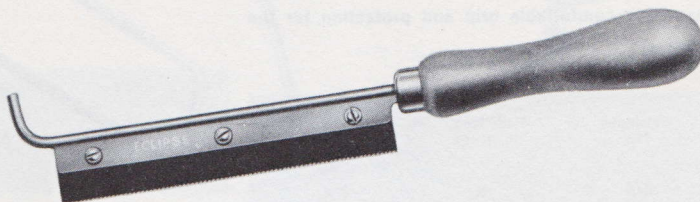
Slotting blade (No. 442) for slotting broken studs, cleaning damaged screw heads, etc. — one edge for use on the push stroke, the other on the draw stroke.

Slitting blade (No. 443) ground on the longitudinal edge, for cutting linoleum, rubber, leather, etc.

Scribing blade (No. 444) ground on the diagonal edge, invaluable for general wood scribing as well as for cutting linoleum, rubber, leather, etc.

The blades are made from high grade steel, specially heat treated to give the best performance and longest life. Spare blades are available.

The die cast handle is made in two halves which swivel and are secured by an easily manipulated screw, which applies a firm grip to the blade in use.



BACK SAW

The ECLIPSE Back saw is a useful tool for all slitting work and for small sawing jobs, and is supplied complete with three interchangeable blades of different thickness and tooth size, the blade in use being secured in the saw by means of three screws.

The beaded back of the saw gives rigidity, and

accuracy is ensured by the comfortable wooden handle and by the thumb rest at the leading end.

Catalogue No.	Overall length in inches
45	10 1/4

Blade Size No.	Description	Length in inches	Width in inches	Thickness in inches	Teeth per inch
453	For general purpose work on wood and metal	5	1	.014	32
454		5	1	.011	44
456		5	1	.008	60

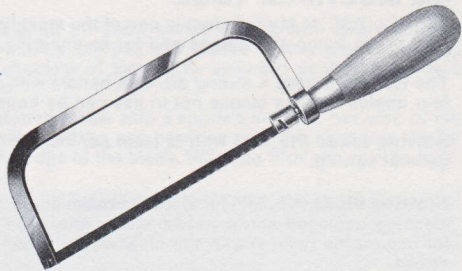


JUNIOR SAW FRAMES

ECLIPSE Junior saw frames are strong plated frames for use with "pinned end" junior saw blades 6" long.

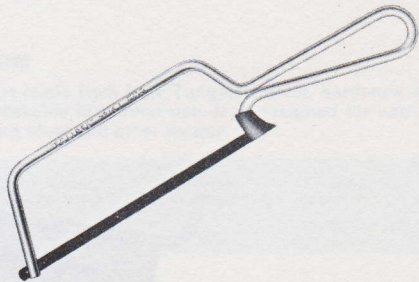
No. 670

This is the frame for the craftsman and is ideal for incorporation in tool kits. The rigid bow and the comfortable hardwood handle provide perfect balance. The correct tension is applied by turning the handle, in which a long steel nut operates on the thread of the tension piece.



No. 14J

This is a popular and inexpensive frame for general purpose use and has innumerable uses in every workshop, garage, home, and farm. The blade is held firmly in position in slots at each end of the bow by the spring tension of the bow. The rubber guard ensures a comfortable grip and protection for the fingers.



Catalogue No.	Blade length in inches	Depth of bow in inches
670	6	2 $\frac{1}{16}$
14J	6	2

JUNIOR SAW BLADES

ECLIPSE Junior saw blades are supplied with pinned ends for use in ECLIPSE Junior saw frames. Produced in the same manner as flexible hacksaw blades, they are unbreakable in normal use and provide a handy and efficient means of cutting not only metal but also bone, wood, and many other materials.

Type of blade	Total Length in inches	Distance between pin centres in inches	Width in inches	Thickness in inches	Teeth per inch
Junior saw	6	5 $\frac{1}{4}$	.250	.017	32

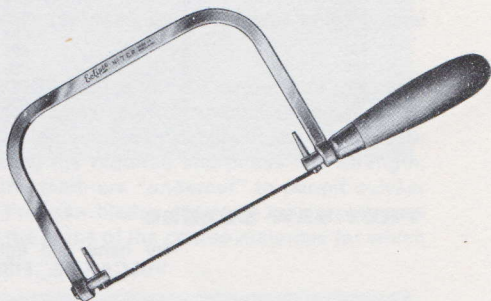


COPING SAW FRAMES

ECLIPSE Coping saw frames are strong, rigid and well-balanced plated frames for use with "pinned end" coping saw blades $6\frac{1}{2}$ " long.

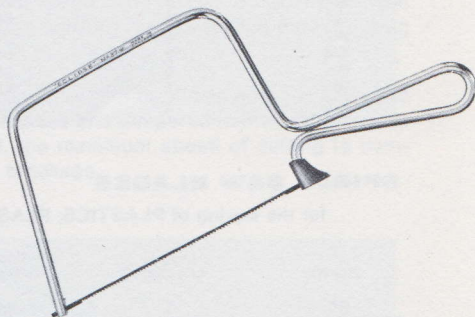
No. 7CP

This is the frame for the craftsman. The correct tension is applied to the blade by turning the comfortable hardwood handle, in which a long steel nut operates on the thread of the tension piece. The blade can be turned to cut at any angle by swivelling the control levers on the tension pieces to the required angle before applying the tension.



No. 27W

This is a popular and inexpensive frame for general purpose use. The blade is held firmly in position in slots at each end of the bow by the spring tension of the bow. The rubber guard ensures a comfortable grip and protection for the fingers.



Catalogue No.	Blade length in inches	Depth of bow in inches
7CP	$6\frac{1}{2}$	$4\frac{3}{4}$
27W	$6\frac{1}{2}$	$4\frac{1}{2}$

COPING SAW BLADES

ECLIPSE Coping saw blades are manufactured from high quality steel, with teeth so shaped and set as to ensure both speed of cutting and ease of turning, and are accurately heat treated to give the correct combination of hardness and toughness. Supplied in one size (with pinned ends) these blades are designed for use in ECLIPSE Coping saw frames for cutting all types of wood.

Type of blade	Total Length in inches	Distance between pin centres in inches	Width in inches	Thickness in inches	Teeth per inch
Coping saw	$6\frac{1}{8}$	$6\frac{1}{8}$	.110	.022	14



PIERCING SAW BLADES

for hand and light machine sawing of GOLD, SILVER, STEEL, COPPER, BRASS, ALUMINIUM, NICKEL, ETC.

Size No.	Length in inches	Width in inches	Thickness in inches	Teeth per inch
M4/0	5	·018	·006	80
M3/0	5	·019	·007	80
M2/0	5	·021	·008	60
M1/0	5	·023	·009	60
M0	5	·025	·010	60
M1	5	·026	·011	52
M2	5	·027	·012	44
M3	5	·030	·014	44
M4	5	·032	·015	32
M5	5	·036	·017	32

FRET SAW BLADES

for hand and light machine sawing of WOOD, BONE, VULCANITE, FIBRE, IVORY, HORN, PLASTICS, ETC.

Size No.	Length in inches	Width in inches	Thickness in inches	Teeth per inch
W1/0	5	·034	·011	32
W0	5	·037	·011	22
W1	5	·039	·014	22
W2	5	·043	·014	18
W3	5	·047	·014	18
W4	5	·051	·017	16
W5	5	·055	·020	16
W6	5	·060	·022	16

SPIRAL SAW BLADES

for the sawing of PLASTICS, PLASTER, ACRYLLIC RESINS, ETC.

Size No.	Length in inches	Width in inches	Thickness in inches	Teeth per inch
S1	5	·024	·011	60
S2	5	·028	·014	52
S3	5	·032	·017	44

JIG SAW BLADES

for machine sawing of STEEL, COPPER, BRASS, ALUMINIUM, NICKEL, WOOD, BONE, IVORY, HORN, ETC.

Length in inches	Width in inches	Thickness in inches	Teeth per Inch and Size No.				
			7	10	16	22	32
6 1/4	·250	·028	A7				
6 1/4	·187	·028		B10			
6 1/4	·187	·022	C7		C16	C22	C32
6 1/4	·110	·020		D10	D16	D22	D32
6 1/4	·070	·017			E16*	E22*	E32*
6 1/4	·035	·011				F22*	F32*

Available with plain or pinned ends except those marked * which have plain ends only.



PIERCING SAW AND FRET SAW BLADES

Special manufacturing processes, adopted after careful and prolonged research and experiment, ensure that ECLIPSE Piercing saw blades and Fret saw blades are of consistent high quality and give a superlative performance both as regards speed, ease and accuracy of sawing and also as regards strength and durability. Their long life, uniformity and sharpness, and the manner in which they will follow a line, turning to right or left with equal ease, are all features which appeal to every craftsman.

In order that the teeth of these ECLIPSE blades should be uniform in shape, they are formed by accurate milling and the tooth formation is regularly inspected by means of a powerful projection microscope. This uniformity of tooth formation is a major factor in providing the required sharpness and strength. On ECLIPSE Piercing saw blades, the teeth are "undercut" to permit quicker penetration in sawing; on ECLIPSE Fret saw blades, the teeth are spread more widely to ensure easier clearance of the chips of the coarse materials for which these blades are designed.

After milling, the teeth are accurately set by a special process which bends them to a predetermined angle to left or right and thus gives an equal and controlled degree of clearance on either side of the blade. It is this feature that permits accurate sawing and enables the blade to be turned to right or left with equal ease, without any tendency for the teeth to bind or for the blade to drag or wander.

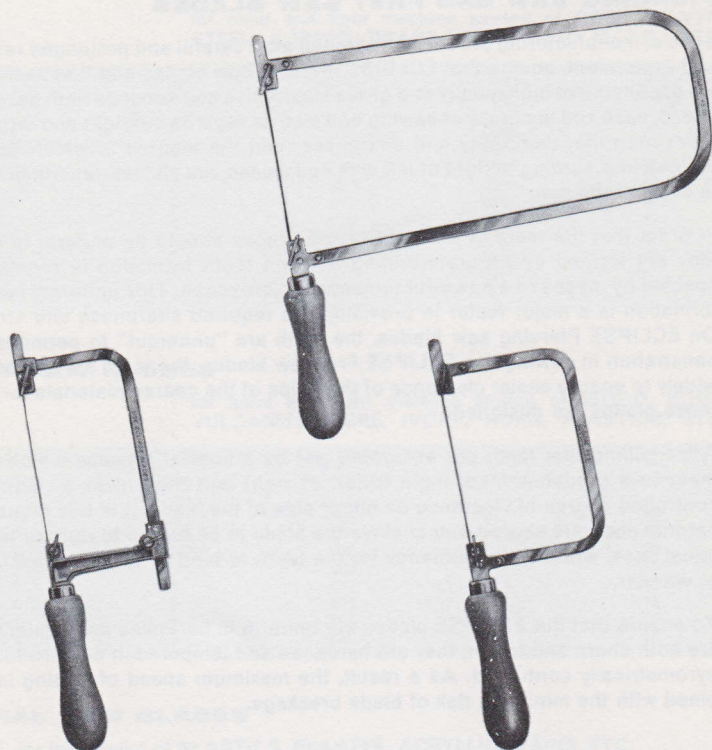
To ensure that the ECLIPSE blades are uniform in hardness and flexibility and are both sharp and tough, they are hardened and tempered in modern furnaces pyrometrically controlled. As a result, the maximum speed of cutting is combined with the minimum risk of blade breakage.

SPIRAL SAW BLADES

ECLIPSE Spiral saw blades are for cutting material which tends to clog the teeth of Piercing saw and Fret saw blades. They are manufactured exactly as ECLIPSE Piercing saw blades but with the toothed portion of the blade accurately spiralled so that spaced evenly along the length of the blade there are teeth pointing outwards in every direction, providing a form of tooth clearance which ensures that the blade does not clog or bind during sawing and that it can cut in any direction without the saw frame itself being turned.

JIG SAW BLADES

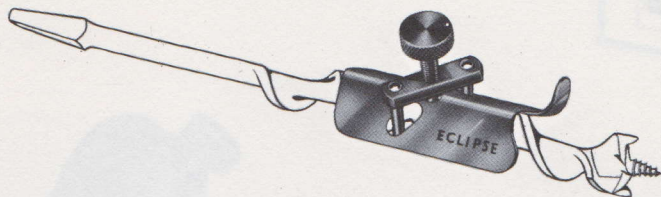
ECLIPSE Jig saw blades are for machine sawing of metals and other materials. They are 6½" long and all sizes are available with plain ends. Blades with pinned ends are available in .028", .022" and .020" thicknesses only, the distance between pins being 6". The size numbers of pinned blades are the same as those of unpinned but with the suffix "P".



FRET SAW AND PIERCING SAW FRAMES

The ECLIPSE Fret saw and Piercing saw frames are exceptionally rigid and well balanced with comfortable hardwood handles. The design of the bow ensures correct tension and a firm grip of the blade is maintained by hardened and serrated clamps operated by wing screws of ample size. The bow and other steel parts are plated.

Catalogue No.	Description	Blade length	Depth of Bow in inches
FS70	Fret saw frame	5"	11½
PS50	Piercing saw frame (adjustable)	Up to 6"	2¾
PS51	Piercing saw frame (non-adjustable)	5"	3½



BIT GAUGE

The ECLIPSE Bit gauge is a simple but effective tool, with no loose parts, for attaching to an auger bit in order to facilitate the boring of holes of pre-determined depth.

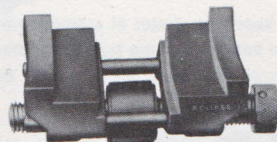
The design of the body and the clamp ensures a secure grip of the bit, whilst the shape of the sleeve provides ample chip clearance. The tool is plated and is equally suitable for Jennings type and solid centre bits.

Catalogue No.	Capacity	Overall length
88	$\frac{1}{8}$ " to $\frac{3}{4}$ " dia. bits	2 $\frac{1}{2}$ "

HONING GUIDE

A simple, well-balanced tool (U.K. Pat. No. 924579) which will hold securely wood chisels and plane irons from $\frac{1}{8}$ " to 2 $\frac{1}{2}$ " wide so that the required angle is applied when honing.

The guide consists primarily of a pair of stepped self-centring jaws. To ensure that the tool to be honed is held securely, one jaw in each pair is curved and the two upper pairs of jaws are undercut. The head of the operating screw is slotted to permit additional tightening. The straight-faced, hardened steel roller permits a true square edge to be honed.

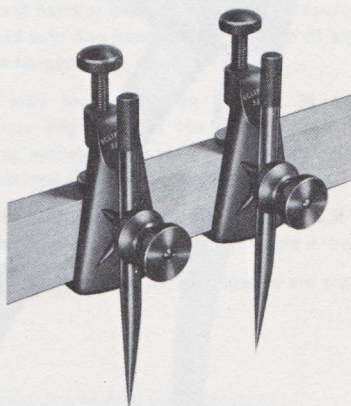


Catalogue No.	Capacity
36	Wood chisels and plane irons from $\frac{1}{8}$ " to 2 $\frac{1}{2}$ " wide

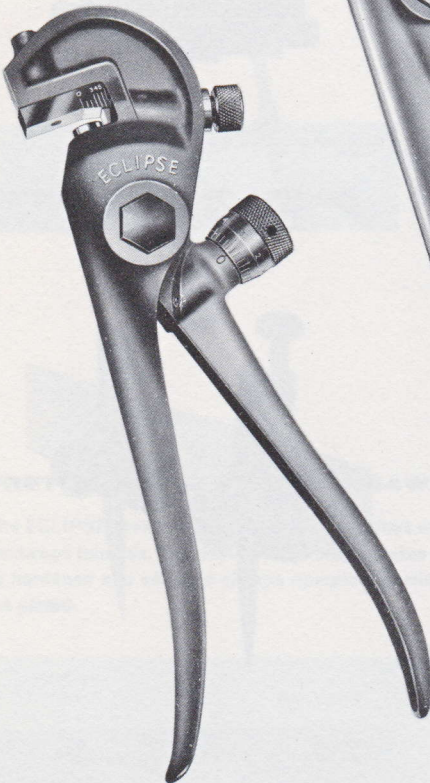
TRAMMEL HEADS

When mounted on a beam of suitable thickness (between $\frac{3}{4}$ " and 1 $\frac{1}{2}$ " wide), ECLIPSE Trammel heads provide an efficient and convenient means of laying out the distance between two points and of scribing arcs and circles outside the capacity of ordinary dividers. They are equally useful for metal, wood and plastics and are, therefore, invaluable for pattern makers, joiners, sheet metal workers, machinists, etc.

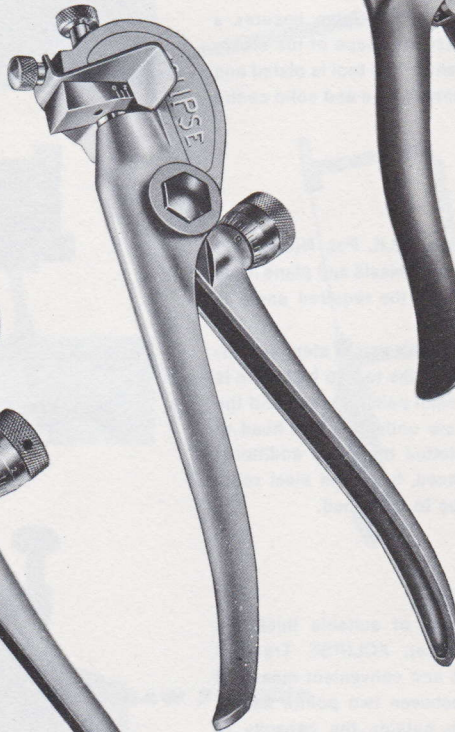
The hardened and ground points are eccentric so that final adjustment (within the $\frac{1}{16}$ " variation thus provided) can be made before clamping the point to the body. The points, moreover, can be secured either vertically or at 45°—the angular setting being essential when marking under a ledge or similar obstruction; and when required, a pencil can be used in place of the point.



Catalogue No.	Capacity of clamp
33	Beams from $\frac{3}{4}$ " to 1 $\frac{1}{2}$ " wide



No. 79



No. 78



No. 77



SAW SETS

No. 77 A fully adjustable and self-contained tool, for setting the teeth of hand saws with from 4 to 12 points and up to 16-gauge thick.

The graduated anvil can be quickly adjusted to the appropriate position to provide the required amount of set.

When the comfortable handles are squeezed together, the tool, in one smooth progressive movement, first grips the saw and then accurately sets the tip of the tooth to the required angle,

without subjecting the root or base of the tooth to unnecessary strain; a clear view of the tooth is obtained throughout the operation.

The lever mechanism is totally enclosed and the anvil and setting plunger are heat treated to ensure trouble-free service; the anvil and screws are plated.

No. 78 and No. 79 Fully adjustable and self-contained tools, each designed to set the teeth of a specific type of saw — the No. 78 for cross-cut saws with a tooth pitch of from $\frac{1}{4}$ " to $1\frac{1}{4}$ " and up to 13-gauge thick, and the No. 79 for circular saws with a tooth pitch of $\frac{1}{4}$ " and over and up to 10-gauge thick; both can also be used for setting the teeth of medium sized wood-cutting band saws.

The depth of set (indicated on the graduated anvil) can be quickly varied by means of the adjusting screw on the head which controls the position of the tooth stop.

The amount of set can be quickly and easily varied by means of the knurled thimble on the handle, which is graduated to facilitate the repetition of known adjustments.

The combination of the totally enclosed lever mechanism (U.K. Pat. No. 611125) and the strong

die-cast handles enables sufficient pressure to be applied with one hand to set the teeth of any saw in the range.

The wide tooth stop on the No. 78 ensures accurate alignment of the tooth points during setting, whilst a clear view of the tooth being set is obtained throughout the operation.

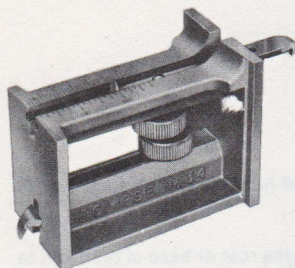
The narrow head on the No. 79 enables it to be applied to the tooth at an oblique angle if required.

The anvils, tooth stops, and screws are plated.

Catalogue No.	Description	Capacity	
		Tooth size	Saw thickness
77	For hand saws	4 to 12 points per inch	Up to 16G.
78	For cross-cut saws	$\frac{1}{2}$ " to $1\frac{1}{2}$ " tooth pitch	Up to 13G.
79	For circular saws	$\frac{1}{2}$ " tooth pitch and over	Up to 10G.



BUTT GAUGE



The ECLIPSE Butt gauge meets the need for a lightweight tool for gauging and marking doors and jambs prior to sinking for butt hinges.

Manufactured from a strong aluminium alloy, it has a single-ended and a double-ended scriber and is equally suitable for use on both square-faced and rabbeted jambs and doors. The setting of the double-ended scriber is facilitated by the provision of a graduated scale (in sixteenths of an inch and in millimetres) on the body of the gauge.

Catalogue No.	Dimensions in inches	Capacity in inches
34	$2\frac{1}{2} \times 1\frac{1}{8} \times 1\frac{1}{2}$	1 $\frac{1}{8}$

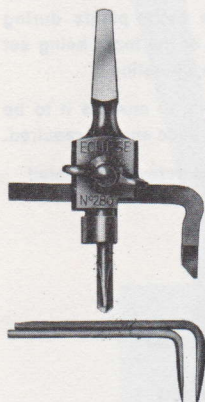


WOODWORKER'S SCRIBER

The design of the ECLIPSE Woodworker's scriber ensures that the wood can be scored or cut, across or with the grain, with ease and accuracy.

The sturdy blade is hardened and tempered, with a ground edge, the point of which remains in view during scribing. The knurling on the blade holder ensures a positive grip.

Catalogue No.	Overall length in inches	Width of blade in inches
35	6	$\frac{1}{8}$

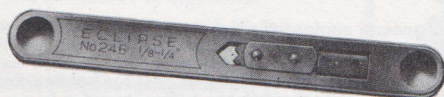
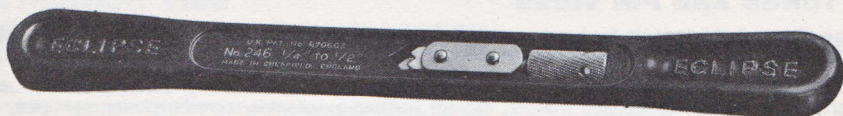


TANK AND WASHER CUTTER

Designed for use in a carpenter's brace, the ECLIPSE Tank and washer cutter is a dual-purpose tool which, with its tank cutter blade, will cut holes of from 1" to 5" diameter in tanks, boilers and sheet metal and, with its two washer cutter blades, will cut washers of from 1" to 5" diameter from leather, rubber, plastics and similar materials.

It can be easily adjusted and rigidly secured by hand (without recourse to other tools), the blades being held firmly in the body by means of a cotter operated by a wing nut. Although primarily designed as a composite tank and washer cutter for use in a carpenter's brace, this tool is also available as a tank cutter only or with a round shank for use in a slow-speed drilling machine.

Catalogue No.	Description	Type of shank	Overall length in inches
280	Tank and washer cutter	Standard bit stock	4 $\frac{1}{2}$
281	Tank cutter	Standard bit stock	4 $\frac{1}{2}$
282	Tank cutter	$\frac{3}{8}$ " round	4 $\frac{1}{2}$
283	Tank and washer cutter	$\frac{3}{8}$ " round	4 $\frac{1}{2}$



TAP WRENCHES

SUPER TYPE

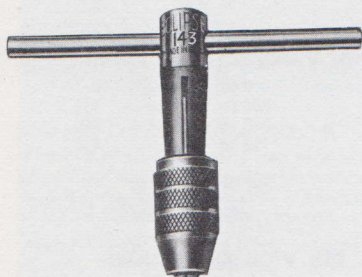
Of unique design (U.K. Patent No. 670663) and with marked improvements over all other types.

The thin construction of the jaws ensures that the square of the tap is gripped by the whole depth of the jaws, and the even and centralised pressure thus provided guarantees rigidity and correct alignment.

The operating nut is clear of the end of the wrench to obviate inadvertent loosening during tapping.

The flat body facilitates correct alignment and easy starting.

When using small taps, sensitive "feel" and control is provided by the dimples at each end.



CHUCK TYPE

For accurate tapping especially in recessed or difficult positions. The chuck jaws are stepped to facilitate the holding of taps of different sizes; larger sizes of tap being accommodated by the outer part and smaller taps by the inner part of the jaws.

BAR TYPE

For general purpose use, providing ample leverage and a comfortable grip.



Catalogue No.	Type	Capacity (British Standard taps)		Overall length in inches
		Whitworth	B.A. Nut	
244	Super	0" to 1/8"	No. 9 to No. 3	3 3/4
245	Super	1/8" to 1/4"	No. 2 to No. 0	5 1/2
246	Super	1/4" to 1/2"		11 1/4
141	Chuck	0" to 1/8"	No. 9 to No. 3	1 13/16
142	Chuck	1/8" to 1/4"	No. 2 to No. 0	2 11/16
143	Chuck	3/16" to 3/8"		3 3/8
240	Bar	1/8" to 1/4"	No. 8 to No. 0	3 3/4
241	Bar	3/16" to 3/8"		6



PIN TONGS AND PIN VICES

A range of work-holding tools for hand use having an attractive black "jet" finish. Designed for holding small tools and material, and having hollow handles so that material and articles of any length can be held.

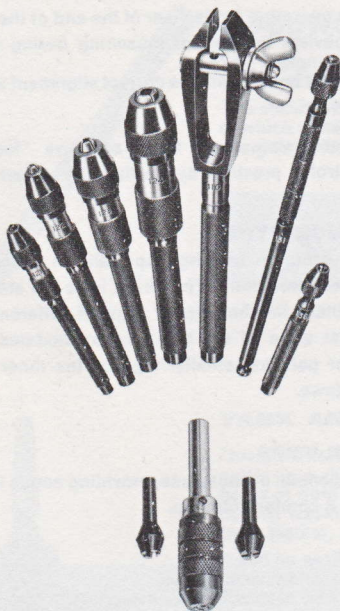
PIN TONGS are the lightest and most delicate of these tools and are designed for precision use by jewellers, watchmakers, instrument makers, etc. for holding small pins, screws, pivots, spindles, wire, broaches and similar articles.

PIN VICES are designed for general engineering use —

Chuck-type for holding round material.

Open-jaw type (having $\frac{3}{16}$ " wide jaws with parallel edges) for holding flat material and capable also of holding round material, the capacity through the hollow handles being $\frac{3}{32}$ ".

The handles of ECLIPSE Pin tongs and Pin vices are knurled to permit easy handling and to enable the tool to be rotated with ease between thumb and finger; the jaws are hardened and tempered.



Catalogue No.	Capacity in inches	Overall length in inches
PIN TONGS		
131	0 to .020	4 $\frac{7}{8}$
131	.020 to .040	4 $\frac{7}{8}$
133	.040 to .064	4 $\frac{7}{8}$
130	Set of one each, Nos. 131, 132, 133	
136	0 to .020	2 $\frac{1}{4}$
PIN VICES (CHUCK TYPE)		
121	0 to .040	3
122	.030 to .062	3 $\frac{1}{2}$
123	.050 to .125	3 $\frac{3}{4}$
124	.115 to .187	4 $\frac{1}{4}$
120	Set of one each, Nos. 121, 122, 123, 124	
PIN VICE (OPEN-JAW)		
110	0 to .187	4 $\frac{3}{4}$
PIN CHUCKS		
160	$\left\{ \begin{array}{l} 0 \text{ to } \frac{1}{32} \\ \frac{1}{32} \text{ to } \frac{1}{16} \\ \frac{1}{16} \text{ to } \frac{1}{8} \end{array} \right\}$	2 $\frac{1}{2}$
161	0 to $\frac{1}{32}$	2 $\frac{1}{4}$
162	$\frac{1}{32}$ to $\frac{1}{16}$	2 $\frac{1}{2}$
163	$\frac{1}{16}$ to $\frac{1}{8}$	2 $\frac{1}{4}$

PIN CHUCKS

Designed for holding small drills firmly and centrally in a drilling machine, the ECLIPSE Pin chuck is supplied either with one collet as No. 161 (0" to $\frac{1}{32}$ "), No. 162 ($\frac{1}{32}$ " to $\frac{1}{16}$ ") or No. 163 ($\frac{1}{16}$ " to $\frac{1}{8}$ ") or with all three interchangeable collets as No. 160 (0" to $\frac{1}{8}$ ").

The double-acting movement of the body on the tapered front and the tapered back of the collet ensures that the whole length of the collet (and not just the tip) grips the drill; the grip is made doubly firm by limiting to $\frac{1}{4}$ " the capacity through which each collet acts.

The provision of bearing surfaces on either side of the thread on the nose and the body permits the centring of the nose relative to the axis of the body to be independent of the thread, thereby ensuring accurate centring of the collet, and hence of the drill.



INSTRUMENT VICE

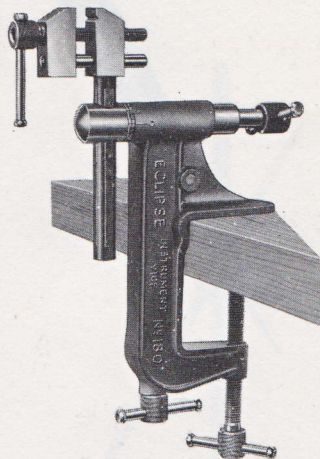
Consisting of a bench cramp with swivelling head into which fits a small stake vice, the ECLIPSE Instrument vice is a universal tool for holding small work securely and conveniently in any position or at any angle, and is designed for use by instrument makers, tool makers, jewellers, dental mechanics, model makers and all classes of engineers.

The position of the stake vice can be adjusted in the swivelling head, and the swivelling head (which is calibrated for ease of setting up) can be turned at any angle and moved backwards and forwards at right angles to the bench.

The grooved jaws of the hardened stake vice enable not only flat but also round material to be securely gripped, and the provision of flats on the shank of the vice enable it to be used separately in an ordinary bench vice.

All clamping screws have spring loaded tommy bars which can be smoothly adjusted but cannot be removed.

Other tools (such as an ECLIPSE pin vice) of up to $\frac{3}{8}$ " diameter can be held in the swivelling head in place of the stake vice; and it can be used as a fly-tying vice by fishing enthusiasts, or, in combination with one or more additional instrument vices, as a fixture for welding, brazing or soldering.



Catalogue No.	Width of vice jaws in inches	Capacity of vice jaws in inches	Capacity of cramp in inches
180	$\frac{1}{2}$	1	$2\frac{1}{8}$

COMPOSITE VEE VICE

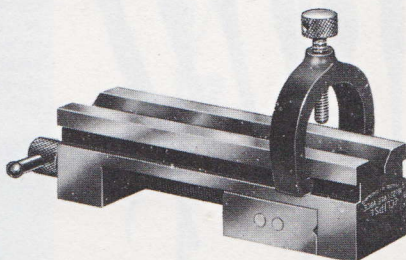
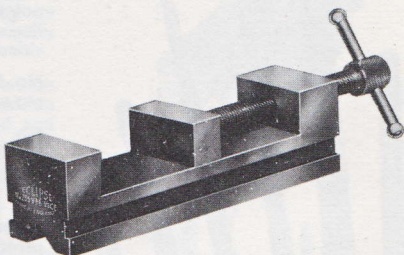
The ECLIPSE Composite vee vice is a dual purpose tool providing not only a toolmaker's vice with a capacity of 3" but also, when reversed, a hardened and ground vee block complete with sliding clamp.

Interchangeable sliding jaws, secured by a spring circlip, provide ample vice capacity combined with a minimum length of operating screw.

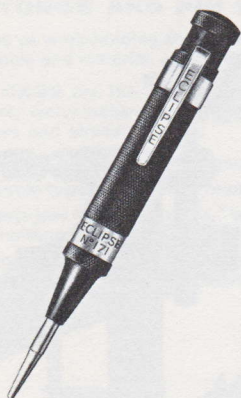
The larger sliding jaw, which has horizontal and vertical grooves to ensure a firm grip of round material, also houses two ground parallels, which enable holes to be drilled without risk of damage to drill or vice.

A $\frac{3}{16}$ " hole is provided in the bed of the tool, so that, when in use as a vice, small pieces of material can protrude below the bed and, when in use as a vee block, material can be drilled without damage to drill or tool.

All working surfaces are ground. The surfaces of the body are square to one another within a tolerance of .0005", opposite surfaces also being parallel within a tolerance of .001". The 90° vee is central and parallel to both the upper and lower surfaces within a tolerance of .001".



Catalogue No.	Capacity in inches		Dimensions of body in inches
	Vice	Vee block	
235	3	1	$6\frac{3}{8} \times 1\frac{1}{4} \times 1\frac{1}{8}$



AUTOMATIC CENTRE PUNCH

The ECLIPSE Automatic centre punch is an indispensable marking-out tool which, when depressed, applies a sharp blow by means of its automatic spring-operated action and which can be adjusted to make a uniform impression of any size from a light dot to a heavy punch mark.

The spring pressure can be adjusted, between its limits of approximately 5 lb. (for very light dotting) and 30 lb. (for heavy punching), by simply turning the knurled head.

The hardened and ground point can be conveniently removed for regrinding or eventual renewal.

The mechanism is totally enclosed and is constructed to give trouble-free service. The body has an attractive black "jet" finish and is fitted with a nickel plated pocket clip.

Catalogue No.	Overall length in inches
171	4½

ENGINEERS' SCRIBERS

The practical design and perfect balance of every ECLIPSE Scriber, combined with the reliability of the hardened and ground point, facilitates accurate marking out. All ECLIPSE Scribers have an attractive black "jet" finish and the Pocket scribers are fitted with a well designed nickel plated pocket clip.

No. 220 and 221. Two sizes of pocket scriber with detachable points which, when not in use, can be reversed and housed within the body of the tool, a secure grip in either position being provided by a collet chuck operated by the screwed nose.

No. 222. A popular model of double-ended engineer's scriber for general purpose use.

No. 223 and 224. A double-ended and single-ended scriber respectively, with detachable points which, having a knurled band, can be easily removed for regrinding or eventual renewal.

No. 225. This new ECLIPSE pocket scriber has a detachable tungsten carbide tipped point which, when not in use, can be reversed and housed within the body of the tool. The tungsten carbide used for the point has been specially selected to give long service when scribing fine lines on castings, forgings and hot rolled bar as well as on hardened and tempered tool steels. The small diameter and finely ground tip of the point ensure good visibility in use. The tungsten carbide point is interchangeable with the steel point of the No. 220 pocket scriber.

Catalogue No.	Overall length in inches
220	5 open, 4¼ closed
221	6½ open, 5 closed
222	7
223	8
224	5¾
225	4¼ open, 4¼ closed





SURFACE GAUGES

ECLIPSE Universal surface gauges are designed for the discriminating engineer and are supplied in three sizes.

The hardened and ground scriber can be set at any position on the spindle, which in turn can be set at any angle; final adjustment is obtained by pivoting the spring-loaded spindle support bracket by means of the fine-pitch adjusting screw. On the two larger sizes, a $\frac{1}{4}$ " hole in the spring-loaded scriber holder enables a dial indicator to be fitted. If required, the scriber can be fitted into the spindle support bracket in place of the spindle.

The base is made from case-hardened steel, ground on the bottom and at one end, and with accurately machined finger grooves along either side for ease of handling and with a vee-groove in the bottom for use on cylindrical work. Retractable gauge pins are provided which can be pushed down when required for working against a suitable edge, as on a surface plate.

ECLIPSE Nos. 103 and 104 Surface gauges are robust models designed for general purpose use.

No. 103 has a fixed spindle on a cast-iron base, machined on the bottom and one end and with finger grooves along the sides. The hardened and ground scriber can be rigidly secured at any position on the spindle.

No. 104 has an adjustable spindle and a cast-iron base which has recessed sides and a vee groove on the bottom and is machined on the bottom and one end. The hardened and ground scriber can be rigidly secured at any position on the spindle, final adjustment being carried out by means of the adjusting screw controlling the spring-loaded rocking bracket.

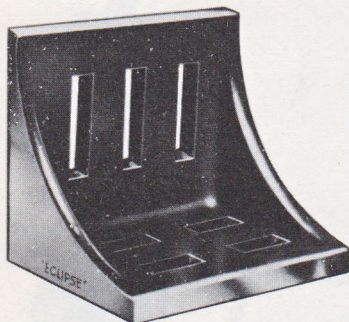


Catalogue No.	Base dimensions in inches	Spindle length in inches
100	$2\frac{3}{8} \times 1\frac{1}{2}$	4
100A	"	7
100B	"	4 & 7
101	$3\frac{1}{8} \times 2\frac{1}{2}$	9
101A	"	12
101B	"	9 & 12
102	$4 \times 3\frac{3}{8}$	12
102A	"	18
102B	"	12 & 18
103	$2\frac{1}{4} \times 2\frac{1}{2}$	9
104	$3\frac{3}{8} \times 2\frac{1}{2}$	12



ANGLE PLATES

ECLIPSE Angle plates are supplied in a range of sizes in the "webbed-end", "open-end", "box" and "swivel" patterns. They are manufactured from high quality close-grained castings, seasoned as a precaution against distortion.



WEBBED-END

Accurately machined on the outside faces and ends within the following tolerances:

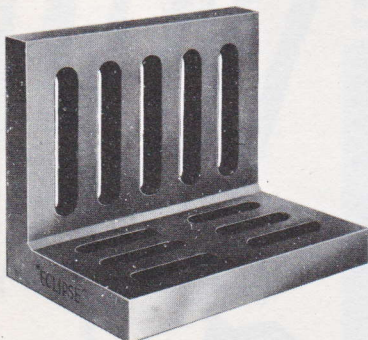
Squareness of faces:	·001" per foot
Squareness of ends to faces:	·002" per foot
Edges parallel to faces:	·001"
Flatness of faces:	·001"

Catalogue No.	Length in inches	First angle in inches	Second angle in inches
199	3	2½	2
200	3½	3	2½
201	4½	3½	3
202	6	5	4½
203	7	5½	4½
204	8	6	5
205	9	7	6
206	10	8	6
207	12	9	8

OPEN-END

Accurately machined on all faces within the following tolerances:

Squareness of faces:	·0015" per foot
Squareness of ends to faces:	·002" per foot
Edges parallel to faces:	·001"
Flatness of faces:	·001"
Faces parallel, inside to outside:	·002" per foot



Catalogue No.	Length in inches	First angle in inches	Second angle in inches
301	4½	3½	3
302	6	5	4½
303	7	5½	4½
304	8	6	5
305	9	7	6
306	10	8	6
307	12	9	8



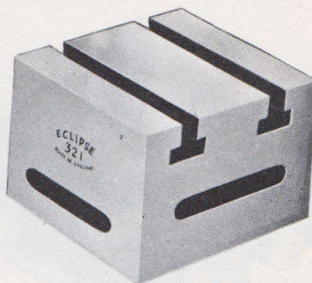
ANGLE PLATES—continued

BOX TYPE

Accurately machined on all outside faces within the following tolerances and invaluable for tool room and model-making work, especially on surface grinders:

Any 2 faces parallel: .0005"

Squareness of any 2 faces: .001"



Catalogue No.	Length In inches	Breadth In inches	Height In inches
321	3	2½	2
322	4	3¾	2¾
323	5	4¾	3¾

SWIVEL TYPE

Carefully machined on all outside faces and edges.

The low overall height gives maximum headroom.

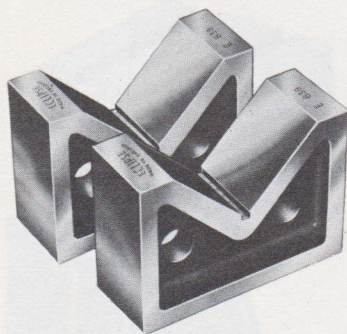
The positioning of the swivel bolts permits the angle plates to be used when stood on end.

The calibrated insert permits the degree of angularity to be indexed, and a spring washer provides a frictional hold during adjustment.

Tapped holes are provided in the longitudinal edges for use with stop plates and, on the No. 312, also in the face for clamping purposes.



Catalogue No.	Length In inches	Breadth In inches	Height with faces parallel
311	5	3¾	3
312	7	5	4



VEE BLOCKS

ECLIPSE Vee blocks are supplied in matched and numbered pairs, manufactured from high quality close-grained grey iron castings seasoned as a precaution against distortion, and accurately machined within the following tolerances and with the 90° vee truly centred.

Veas parallel to base, single block:	·0005"
Veas parallel to base, in pairs, measured over a bar 12" long:	·001"
Squareness of each block:	·001"
Width of blocks, in pairs:	·001"
Faces parallel:	·002"

Catalogue No.	Width in inches	Height in inches	Thickness in inches	Capacity within vee in inches
211	3	2¼	1¼	2½ dia.
212	4	3	1½	3½ dia.
213	5	3½	1¾	4 dia.
214	6	4	2	5 dia.
215	7	5	2¼	6 dia.
216	8	6	2½	7 dia.



VEE BLOCKS AND CLAMPS

No. 231

For use on precision work by toolmakers and skilled engineers.

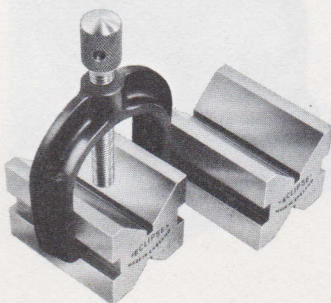
The set comprises a precision-matched and numbered pair of vee blocks and a pair of neat strong malleable iron clamps with steel screws.

The vee blocks are manufactured from case-hardened steel. All working surfaces are ground square to one another within a tolerance of .0003". The vees are central and parallel, and square to the ends, to within the same tolerance.

No. 230

Ideal for general purpose use, the set comprises a matched and numbered pair of cast-iron vee blocks with 90° vees and a robust malleable iron clamp with steel screw.

Catalogue No.	Dimensions of blocks in inches	Capacity (with clamp) in inches
231	1½ × 1¼ × 1¼	1 dia.
230	2 × 1½ × 1½	1½ dia.





TOOL BITS

All over the world, ECLIPSE Tool bits have built up a reputation for consistent high quality and exceptional ability to maintain a good cutting edge. A number of factors contribute to this reputation for dependability, the principal one being that, from the melting of the steel to the final inspection of the finished tools, every process has to conform to predetermined standards.

The steels from which the tool bits are made are special High Speed Steels from the Company's own high frequency melting furnaces; they are thus to the exact specification which research and experience have proved to be the most suitable. Hardening and tempering are carried out in modern furnaces, and are rigidly controlled to give the perfect combination of hardness and toughness. The tool bits are accurately ground to prevent chatter.

ECLIPSE Tool bits are available in three grades.

- VH** A premier quality tool bit, made from vacuum heat-treated steel of special ECLIPSE analysis, permitting maximum speed of cutting and providing longer life, even on the most difficult of the highly alloyed materials.
- H5** The ideal general purpose tool bit with the optimum combination of hardness, grindability, cutting performance and toughness. It can be used at high speeds on engineering steels of good machineability or upon more highly alloyed steels at lower speeds.
- HM2** An economically priced tool bit with excellent cutting properties and high toughness for normal cutting of engineering steels and non-ferrous materials.

To ensure that the highest standards of cutting efficiency are maintained, metallurgical inspection and practical tests are constantly applied, a procedure which is also designed to discover how further improvements in performance can be achieved.



SQUARE AND ROUND TOOL BITS

ECLIPSE Tool Bits are available in the sizes and grades indicated in the table below.

SQUARE TOOL BITS

INCH SIZES		Grade in which available			
Section in inches	Length in inches				
$\frac{3}{16}$	2	VH	H5	HM2	
$\frac{3}{16}$	$2\frac{1}{2}$	VH	H5		
$\frac{1}{4}$	$2\frac{1}{2}$	VH	H5	HM2	
$\frac{1}{4}$	3	VH	H5	HM2	
$\frac{1}{4}$	4	VH	H5		
$\frac{5}{16}$	$2\frac{1}{2}$	VH	H5		
$\frac{5}{16}$	3	VH	H5	HM2	
$\frac{5}{16}$	4	VH	H5		
$\frac{3}{8}$	3	VH	H5	HM2	
$\frac{3}{8}$	4	VH	H5	HM2	
$\frac{3}{8}$	6	VH	H5		
$\frac{7}{16}$	$3\frac{1}{2}$	VH	H5		
$\frac{1}{2}$	$3\frac{1}{2}$	VH	H5	HM2	
$\frac{1}{2}$	4	VH	H5	HM2	
$\frac{1}{2}$	6	VH	H5		
$\frac{5}{8}$	4	VH	H5	HM2	
$\frac{5}{8}$	6	VH	H5	HM2	
$\frac{3}{4}$	4	VH	H5	HM2	
$\frac{3}{4}$	6	VH	H5		
$\frac{7}{8}$	6	VH	H5		

METRIC SIZES		Grade in which available	
Section in millimetres	Length in millimetres		
6	80	H5	
6	100	H5	
8	100	H5	
8	160	H5	
10	100	H5	
10	160	H5	
10	200	H5	
12	100	H5	
12	160	H5	
12	200	H5	
14	125	H5	
14	200	H5	
16	125	H5	
16	200	H5	
18	200	H5	
20	200	H5	

ROUND TOOL BITS

INCH SIZES		Grade in which available	
Diameter in inches	Length in inches		
$\frac{3}{16}$	2	VH	H5
$\frac{1}{4}$	$2\frac{1}{2}$	VH	H5
$\frac{5}{16}$	3	VH	H5
$\frac{3}{8}$	3	VH	H5
$\frac{1}{2}$	$3\frac{1}{2}$	VH	H5
$\frac{5}{8}$	4	VH	H5

METRIC SIZES		Grade in which available	
Diameter in millimetres	Length in millimetres		
5	80	H5	
6	100	H5	
8	100	H5	
10	125	H5	
12	125	H5	
16	160	H5	

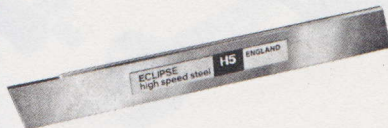


CUTTING-OFF TOOLS

Manufactured from ECLIPSE H5 Cobalt High Speed Steel and with the same care as ECLIPSE Tool bits.

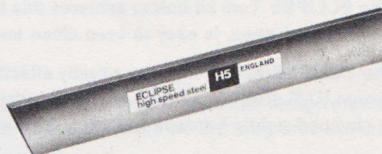
BEVEL SECTION, accurately ground with a clearance angle at the cutting edge.

Width in inches	Thickness in inches		Length in inches
	Top edge	Bottom edge	
$\frac{1}{2}$	$\frac{3}{32}$	$\frac{1}{16}$	$4\frac{1}{2}$
$\frac{5}{8}$	$\frac{3}{32}$	$\frac{1}{16}$	5
$\frac{3}{4}$	$\frac{1}{8}$	$\frac{1}{16}$	6
$\frac{7}{8}$	$\frac{1}{8}$	$\frac{1}{16}$	7
1	$\frac{3}{16}$	$\frac{1}{8}$	8



HOLLOW GROUND, providing extra side clearance.

Width in inches	Thickness in inches	Length in inches
$\frac{3}{16}$	$\frac{1}{16}$	$3\frac{1}{2}$
$\frac{1}{2}$	$\frac{1}{16}$	$4\frac{1}{2}$
$\frac{1}{2}$	$\frac{3}{32}$	$4\frac{1}{2}$
$\frac{1}{2}$	$\frac{1}{8}$	$4\frac{1}{2}$
$\frac{11}{16}$	$\frac{3}{32}$	5
$\frac{11}{16}$	$\frac{7}{32}$	5
$\frac{11}{16}$	$\frac{5}{16}$	5



LATHE TOOL SETS



ECLIPSE Lathe tool sets consist of six tools in a plastic rack. The tools are made from ECLIPSE H5 Cobalt High Speed Steel with the ends jig ground ready for use and the bases ground to ensure correct seating and rigidity. The individual tools in each set are also available separately.

Catalogue No.	Section in inches	Length in inches
420	$\frac{1}{4}$	$3\frac{1}{2}$
430	$\frac{3}{8}$	5



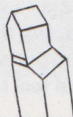
Roughing
421 & 431



Finishing
422 & 432



Parting-off
423 & 433



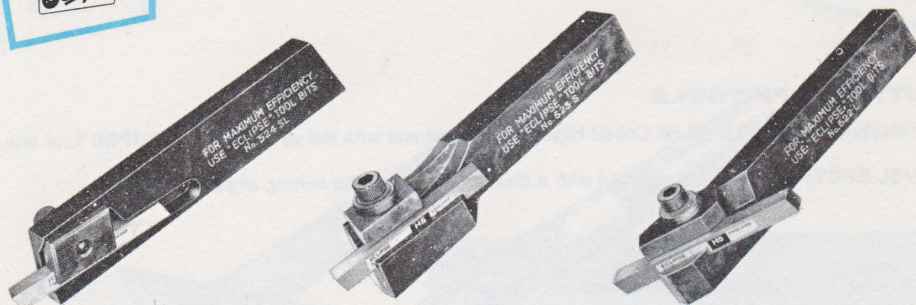
External threading
424 & 434



Boring
425 & 435



Internal threading
426 & 436



TOOL BIT HOLDERS

If maximum value is to be obtained from the ground surface of a toolbit, it must rest on a really flat surface. The ECLIPSE Tool bit holder achieves this by providing a carefully machined groove with relieved corners which, being open, is easy to keep clean and free of swarf.

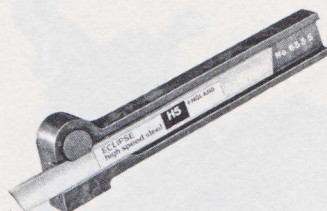
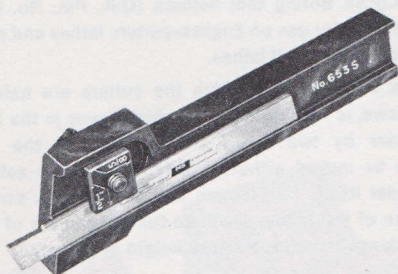
The ECLIPSE holder also has a really effective means of securing the tool bit — a clamp plate of patented design (U.K. Pat. No. 691375) which provides both downwards and sideways pressure so that the tool bit is clamped rigidly between the angle of the groove and the angle of the clamp.

Each size of holder covers a range of tool bit sizes and operates with equal efficiency on any size within that range.

Catalogue No.	Type	Capacity in inches	Shank size in inches	Base to underside of tool bit in inches	Overall length in inches
514SL	Straight	$\frac{1}{8}$ to $\frac{3}{8}$	$\frac{3}{8} \times \frac{3}{8}$	$\frac{1}{4}$	$4\frac{1}{2}$
523S	Straight	$\frac{3}{8}$ to $\frac{1}{2}$	$\frac{1}{2} \times \frac{3}{8}$	$\frac{1}{2}$	5
524SL	Straight	$\frac{3}{8}$ to $\frac{1}{2}$	$\frac{3}{8} \times 1$	$\frac{1}{4}$	$5\frac{1}{2}$
533S	Straight	$\frac{3}{8}$ to $\frac{3}{4}$	$\frac{1}{2} \times 1$	$\frac{1}{2}$	6
534SL	Straight	$\frac{3}{8}$ to $\frac{3}{4}$	$\frac{3}{8} \times 1\frac{1}{2}$	$\frac{3}{8}$	6
544SL	Straight	$\frac{3}{8}$ to $\frac{1}{2}$	$\frac{1}{2} \times 1\frac{1}{2}$	$\frac{1}{2}$	9
521R	Right-hand	$\frac{3}{8}$ to $\frac{1}{2}$	$\frac{1}{2} \times \frac{3}{8}$	$\frac{1}{2}$	5
531R	Right-hand	$\frac{3}{8}$ to $\frac{3}{4}$	$\frac{3}{8} \times 1\frac{1}{2}$	$\frac{1}{2}$	6
522L	Left-hand	$\frac{3}{8}$ to $\frac{1}{2}$	$\frac{1}{2} \times \frac{3}{8}$	$\frac{1}{2}$	5
532L	Left-hand	$\frac{3}{8}$ to $\frac{3}{4}$	$\frac{3}{8} \times 1\frac{1}{2}$	$\frac{1}{2}$	6

The holders with the suffix "SL" are designed for use in American-type (slotted pillar) tool posts, the No. 514SL for small lathes up to $3\frac{1}{2}$ in. centres, the Nos. 524SL and 534SL for lathes over $3\frac{1}{2}$ in. centres and the No. 544SL for the still heavier machines. The other holders, of more robust construction, are designed for use on English-type lathes with flat tool rests or 4-way turret tool posts.

ECLIPSE Tool bit holders are supplied complete with an Allen key and one ECLIPSE H5 Cobalt High Speed Steel Tool bit.



CUTTING-OFF TOOL HOLDERS

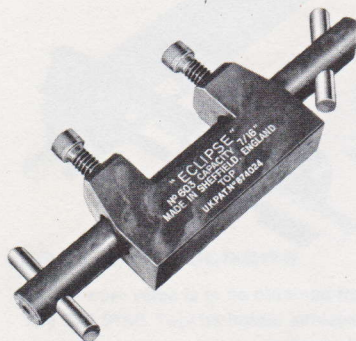
The principal feature of ECLIPSE Cutting-off tool holders is that a clamp plate of patented design provides both downwards and sideways pressure along a large area of the top edge of the tool, thus ensuring complete rigidity.

In the case of the three larger sizes of tool holder (all covered by U.K. Pat. No. 783912), the clamp plate also permits cutting-off tools of different width and thickness (within a certain range) to be held with equal security; this not only enables more than one size of tool to be used in the holder but also relieves the user of worry as to whether the particular size of tool which he intends to use has been manufactured to certain very limited tolerances. An additional feature is the counter spring behind the clamp plate which, by holding the clamp away from the body when the screw is loosened, enables the tool to be quickly inserted or withdrawn.

The smallest size of holder in the range is of slightly different construction (U.K. Pat. No. 861699) and has been designed specifically for use on small lathes such as the Myford, Boxford, Southbend, Smart & Brown, etc.

Catalogue No.	Capacity width in inches	Shank size in inches	Base to under-side of tool in inches	Overall length in inches
633S	$\frac{3}{16}$	$\frac{3}{16} \times \frac{3}{16}$	$\frac{3}{32}$	$3\frac{1}{16}$
653S	$\frac{1}{2}$ to $\frac{3}{4}$	$\frac{1}{2} \times 1$	$\frac{3}{16}$	6
673S	$\frac{1}{4}$ to $\frac{3}{4}$	$\frac{3}{8} \times 1\frac{1}{2}$	$\frac{1}{4}$	7
693S	1 to $1\frac{1}{4}$	$\frac{3}{4} \times 1\frac{1}{4}$	$\frac{1}{4}$	$7\frac{1}{2}$

ECLIPSE Cutting-off tool holders are supplied complete with an Allen key and one ECLIPSE H5 Cobalt High Speed Steel Cutting-off tool.



BORING TOOL HOLDERS

ECLIPSE Boring tool holders (U.K. Pat. No. 874024) are designed for use on English-pattern lathes and are ideal for all users of small lathes.

The cutter bar, in which the cutters are held by Allen screws, is held rigidly in machined vees in the body of the holder by two Allen screws, so that the cutter bar can be moved without interfering with the setting of the holder itself. Two tapped and countersunk screws in the base of the holder facilitate the attachment of permanent packings to suit the centre height of the lathe.

ECLIPSE Boring tool holders are supplied complete with two ECLIPSE H5 Cobalt High Speed Steel cutters and two Allen keys.

Catalogue No.	Holder dimensions in inches		Bar dimensions in inches		Cutter Size No.	Cutter dimensions in inches	
	Height	Length	Diameter	Length		Section	Length
602	$\frac{7}{16}$	$2\frac{1}{2}$	$\frac{3}{16}$	$4\frac{1}{2}$	6021	$\frac{3}{16}$ dia.	1
603	$\frac{11}{16}$	$2\frac{1}{2}$	$\frac{7}{16}$	5	6043	$\frac{1}{4}$ dia.	$1\frac{1}{4}$
604	$\frac{13}{16}$	3	$\frac{9}{16}$	7	6043	$\frac{1}{4}$ dia.	$1\frac{1}{4}$

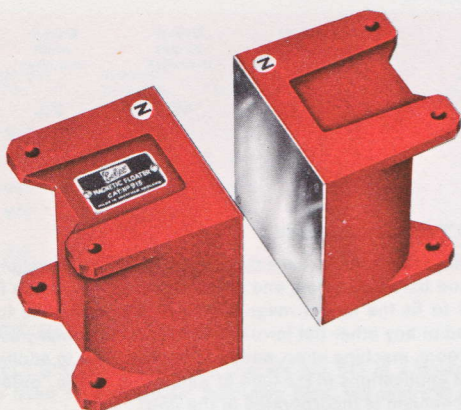
Replacement cutters $\frac{1}{8}$ " sq. \times $\frac{7}{8}$ " (No. 6022), $\frac{3}{16}$ " sq. \times $1\frac{1}{8}$ " (No. 6033) and $\frac{1}{4}$ " sq. \times $1\frac{1}{2}$ " (No. 6044) are also available.



BORING BARS

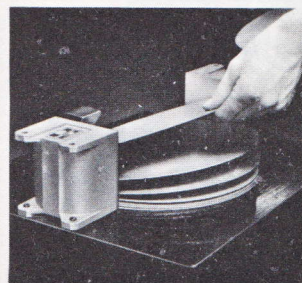
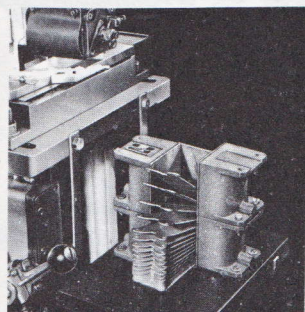
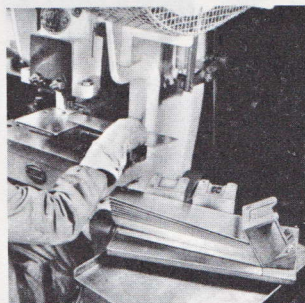
ECLIPSE Boring bars are made from ECLIPSE H5 Cobalt High Speed Steel. They are formed to the correct angle, with the ends ground ready for use and the shanks ground on the underside to provide a flat surface for ease of setting and to ensure rigidity when used in a tool post. Being exceptionally strong and rigid, they will give a really smooth finish.

Diameter in inches	Length in inches
$\frac{3}{16}$	$4\frac{1}{2}$
$\frac{1}{4}$	5
$\frac{5}{16}$	6
$\frac{3}{8}$	7

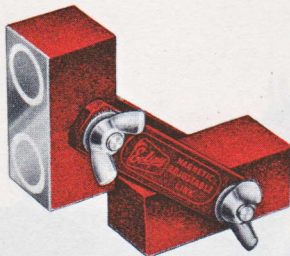


MAGNETIC FLOATERS

Specially designed units to assist the speedy separation of iron and steel sheets and other shapes. Alcomax magnets are housed in an aluminium die-cast housing, and a non-magnetic stainless steel frontplate.



Cat. No.	Width at poles in inches	height in inches	Extreme depth in inches	Fixing centres in inches	Holes	
					Dia-meter in inches	To clear in inches
913	2 $\frac{7}{8}$	3	2 $\frac{9}{16}$	1 $\frac{15}{16}$	$\frac{9}{32}$	$\frac{1}{4}$ Whit.
914	3 $\frac{5}{8}$	4	3	2 $\frac{5}{8}$	$\frac{9}{32}$	$\frac{1}{4}$ Whit.
915	4 $\frac{7}{16}$	6	3 $\frac{1}{2}$	3 $\frac{1}{8}$	$\frac{13}{32}$	$\frac{3}{8}$ Whit.

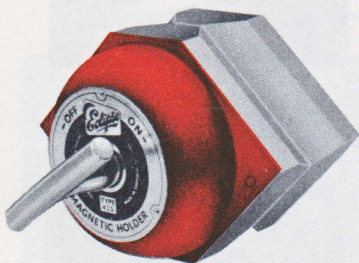



MAGNETIC ADJUSTABLE LINK

The ECLIPSE Magnetic link is the answer when speedy angular clamping of sheet metal material is required. By adjustment and locking of wing nuts the magnetic blocks can be set at any angle.

When used in multiples, a number of sheets can be held in the most complicated arrangement. Being compact in size, they are useful in holding work in confined spaces. Many uses will be found in toolrooms and garages, on all types of holding applications.

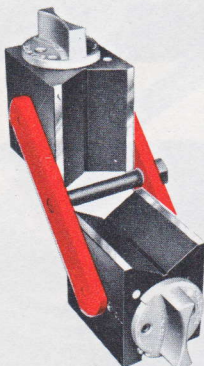
Catalogue No.	Dimensions of each block in inches	Overall length in inches	Overall width in inches
920	$2\frac{1}{4} \times 1 \times 1$	$4\frac{7}{8}$	$2\frac{1}{8}$



MAGNETIC HOLDER

ECLIPSE Magnetic holders have three vee'd pole faces designed to hold round bars and tubes, and plain pole faces to secure flat sections or to fix the holder magnetically at the same time to a machine bed or any other flat ferrous base. They have many uses in the tool room, machine shop, and in assembly work, in addition to unlimited applications in the field of welding. A single "on/off" control mechanism is incorporated in the unit.

Catalogue No.	Dimensions of body in inches	Overall height in inches
925	$4\frac{1}{4} \times 4\frac{1}{4}$	$5\frac{1}{2}$



MAGNETIC POSITIONER

The ECLIPSE Magnetic positioner combines the facilities of the magnetic holder and the adjustable link and will hold round or flat parts at any required angle. Each of the two magnetic blocks has two magnetic faces, energised simultaneously by the control handle. The positioner is locked by tightening the central locknut by a spanner. If necessary, the blocks can be dismantled from the side straps and used individually as work holders.

Catalogue No.	Dimensions of each block in inches	Overall length in inches	Overall width in inches
922	$2\frac{1}{2} \times 2\frac{1}{2} \times 2$	$8\frac{3}{8}$	3

Blocks ONLY are available without fitments;
quote Catalogue No. 922 S.U.



MAGNETIC HOLDFASTS

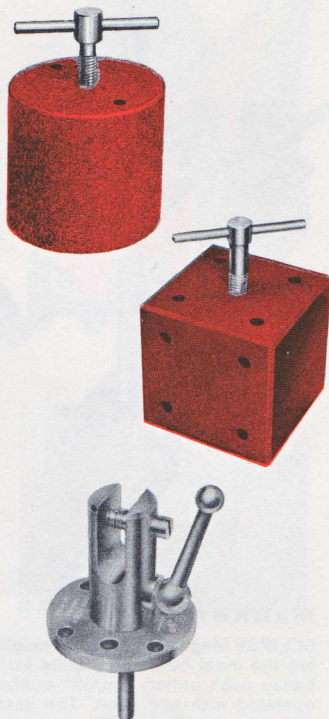
ECLIPSE Magnetic holdfasts are of considerable use in building up welding and fabricating jigs, and can solve many holding and positioning problems. They are, in effect, large magnets of the pot type, comprising a powerful Alcomax magnet located in a mild steel body provided with a jack-off screw.

Holes tapped $\frac{1}{4}$ " Whit. $\frac{1}{4}$ " U.N.C. or 8 S.I. except Cat. Nos. 938 and 942, which are drilled $\frac{3}{4}$ " diam.

Catalogue No.	Diameter in inches	Body in inches	Height Overall in inches	Fixing holes centres in inches
939	1 $\frac{1}{4}$	1 $\frac{1}{4}$	3	1 $\frac{1}{4}$
940	2 $\frac{1}{8}$	4 $\frac{15}{16}$	3 $\frac{7}{16}$	1 $\frac{1}{2}$
941	2 $\frac{3}{4}$	2 $\frac{1}{2}$	3 $\frac{3}{4}$	2
942	4	2 $\frac{15}{16}$	4 $\frac{15}{16}$	2 $\frac{23}{32}$
938	3 $\frac{3}{4}$ cube		5 $\frac{1}{16}$	2 $\frac{1}{4}$

QUICK RELEASE SHACKLE

The ECLIPSE Quick release shackle No. 943 is a device which when used with magnetic holdfasts Nos. 942 and 938 provides easy release of loads and convenient facility for suspending from hooks.



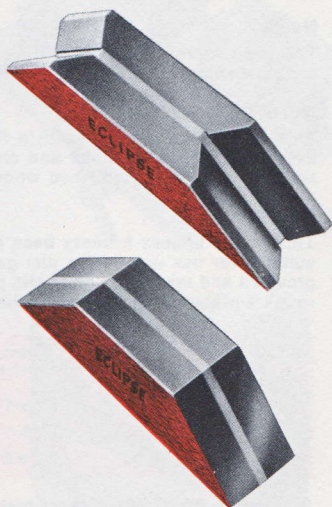
MAGNETIC MITRE CLAMPS

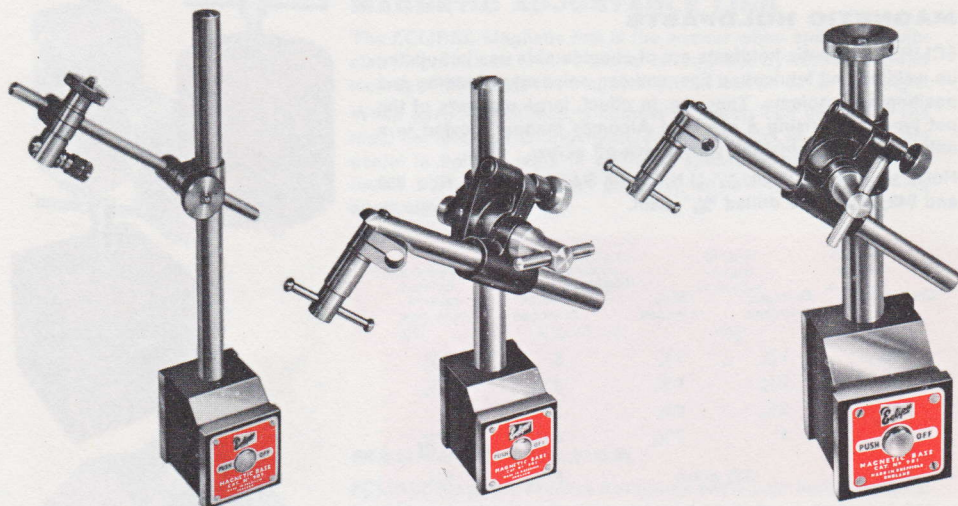
ECLIPSE Mitre clamps provide an inexpensive means of clamping components for assembly or welding. They are available with plain or vee-ends. Both patterns have end contact faces machined to an angle of 45°; the top and bottom faces are also energised.

The plain-end clamp will hold flat material and the vee-end clamp (which has a 120° vee on each end face) will hold round material up to 2 $\frac{1}{2}$ " diameter and also flat material. The clamps can be used to great advantage in multiples.

Mitre clamps do not switch off but can be easily levered away after use.

Catalogue No.	Length in inches		Height in inches	Width in inches
	Base face	Top face		
923 (Plain)	6	2 $\frac{3}{4}$	1 $\frac{1}{4}$	1 $\frac{5}{8}$
924 (Vee)	7	3 $\frac{3}{4}$	1 $\frac{1}{4}$	1 $\frac{5}{8}$





MAGNETIC BASES

ECLIPSE Magnetic bases, for holding dial gauge indicators or scribes, are the most convenient units for this type of duty. Equipped with a handy push button "on/off" control, they can be readily located and operated with one hand. The base and two sides are energised for attachment to flat surfaces and a vee slot facilitates gripping on curved surfaces. There are three models in the range — Nos. 903, 902 and 901.

No. 903

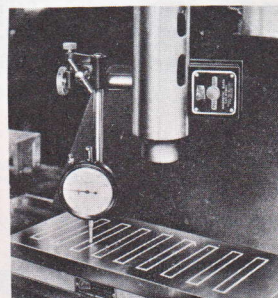
This is an improved version of the original model (previously No. 900A) and now embodies a thicker pillar for increased rigidity.

No. 902

This is a compact model with a fine adjustment screw in the pillar assembly, the heavier pillar and cross bar provide great rigidity. The unit is supplied in a polished wood box.

No. 901

This model utilises a heavy base unit and the heavy fittings make it suitable for use with larger dial gauges. A fine adjustment screw is provided and maximum magnetic performance gives security even on rough surfaces. The unit is supplied in a polished wood box.



Catalogue No.	Base Unit in inches	Overall height in inches
903	$1\frac{1}{8} \times 1\frac{1}{8} \times 1\frac{1}{8}$	9 $\frac{1}{16}$
902	$1\frac{3}{8} \times 1\frac{1}{8} \times 1\frac{1}{8}$	8
901	$2\frac{1}{2} \times 2\frac{1}{2} \times 3$	9 $\frac{1}{16}$

Catalogue No. 900 WF. Supplied as a base unit only, without fittings.
Catalogue No. 901 WF. Supplied as a base unit only, without fittings.

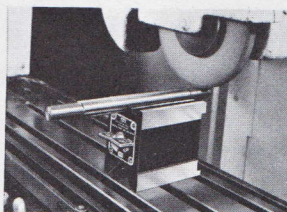
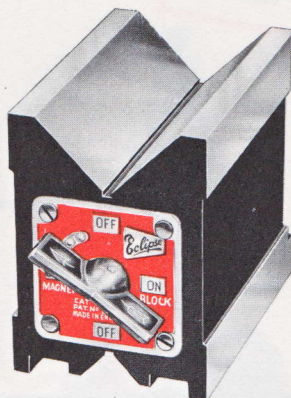


MAGNETIC VEE BLOCK

The ECLIPSE Magnetic vee block is an invaluable and versatile tool for grinding operations involving round or irregular shaped work. Its use minimises setting-up time, and although designed primarily to hold round sections, rectangular and square parts can be equally well held. Its three energised contact faces are precision ground and it will hold itself and the work on any flat ferrous surface. It can be used on machines equipped with magnetic chucks without having to switch on the chuck. The use of coolants will not affect this tool as it is fully sealed.

For protection when not in use, magnetic vee blocks are supplied in a fitted wooden box. For matched pairs quote Cat. No. 934 M.P.

Catalogue No.	Width in inches	Length in inches	Height in inches
934	2 $\frac{3}{4}$	4	3 $\frac{3}{4}$



MAGNETIC VICE

The ECLIPSE Magnetic Vice is an accurate grinding vice, capable of ensuring work square with the minimum of setting up. The design eliminates the distortion experienced in other types of vice, since the hold is entirely magnetic and the vice is NOT subject to distortional thrust normally produced by the screw.

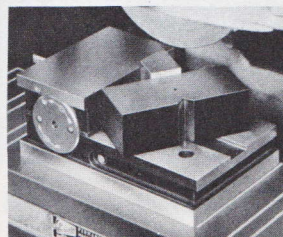
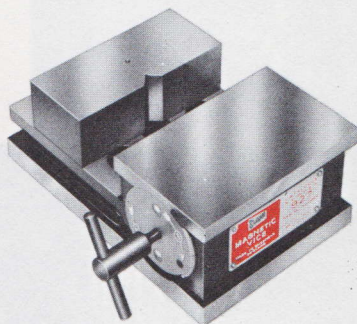
Finish ground faces, which are case hardened, are controlled to the following maximum deviations:—

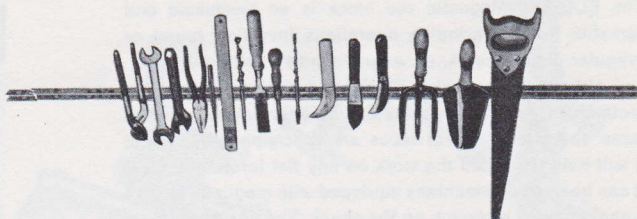
Flatness: 0.0002".

Squareness: 0.0001" per inch.

For protection when not in use, the magnetic vice is supplied in a fitted wooden box.

Catalogue No.	Width in inches	Length in inches	Height in inches
927	5 $\frac{5}{8}$	6 $\frac{1}{8}$	2 $\frac{1}{8}$

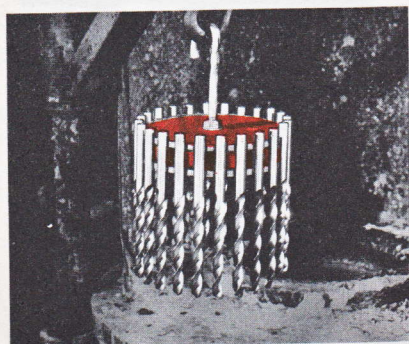
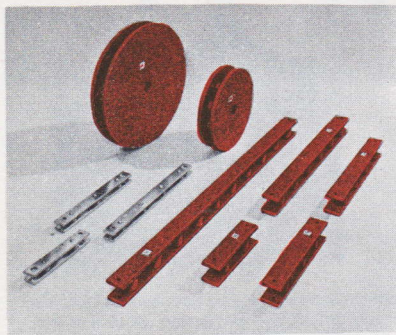




MAGNETIC RACKS

ECLIPSE Magnetic racks, in rectangular and circular form, can be used as tool racks for all manner of tools. In general engineering applications, they can be made up into jigs for holding parts for hardening, greasing, and painting, or used in conjunction with conveyors.

Many holding problems require a large holding area, but with an economical use of magnet materials. ECLIPSE Magnetic racks, which comprise Alcomax magnets between mild steel pole pieces, meet this requirement.



Catalogue No.	Length in inches	Width of pole piece in inches	Width over poles in inches
Light duty — straight			
945	6	1	$\frac{3}{4}$
946	9	1	$\frac{3}{4}$
947	12	1	$\frac{3}{4}$
Heavy duty — straight			
986	6	$1\frac{1}{8}$	$1\frac{1}{8}$
987	9	$1\frac{1}{8}$	$1\frac{1}{8}$
980	12	$1\frac{1}{8}$	$1\frac{1}{8}$
981	18	$1\frac{1}{8}$	$1\frac{1}{8}$
982	30	$1\frac{1}{8}$	$1\frac{1}{8}$
	Diameter in inches	Diameter of centre hole in inches	
Heavy duty — circular			
984	8	1	$1\frac{1}{8}$
985	12	1	$1\frac{1}{8}$

Light duty racks are supplied with two aluminium clamps and two wood screws.

Heavy duty racks are manufactured to metric dimensions and the equivalent dimensions in inches are given for reference only; more detailed information is readily available on request.



MAGNETIC QUICK LIFTER

The ECLIPSE Magnetic quick lifter provides the most rapid means of picking up, and releasing, ferrous loads up to 500 lbs., with flat surfaces and adequate thicknesses, in conjunction with either manual, or power assisted, lifting tackle.

As opposed to large electro-magnetic lifting magnets, which can safely operate in scrap yards and raw materials stores, the quick lifter is intended principally for use in machine shops, after initial machining has been effected or for the handling of semi-finished or finished products, where the loading conditions are controlled. The principal uses of the ECLIPSE magnetic quick lifter are as follows:

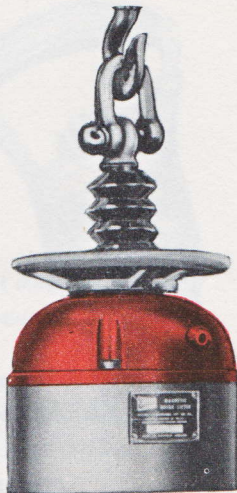
Lifting of semi-finished components, or assemblies, as well as finished products, where slings or grabs cause damage to surfaces.

Lowering loads quickly into final position, without slings, and thereby eliminating subsequent difficulties associated with the removal of trapped slings.

Rapid automatic pick-up and discharge of components for transfer machines, assembly lines or general mechanical handling.

The hold is provided by exceptionally strong Alcomax permanent magnets, capable of giving unlimited service. Dependence on external electric supply, with possible power failures, or on batteries, is therefore entirely eliminated.

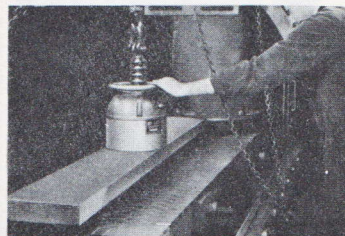
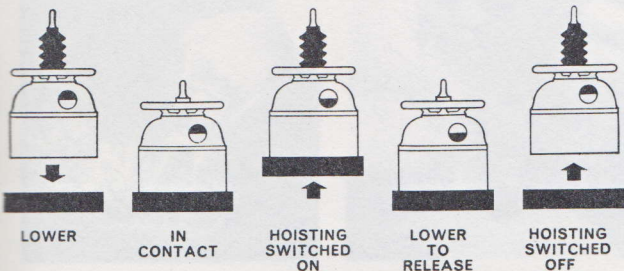
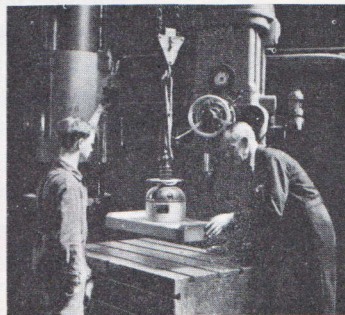
The body of the quick lifter has a stove enamelled grey hammer finish; the cover has a stove enamelled red crinkle finish. The quick lifter is supplied with a hand operating key and shackle and in a wooden box.



Catalogue No.	Diameter in inches	Height in inches		
		To hand wheel	When lifting	When idle
975	9 1/2	9 3/4	15 3/4	12

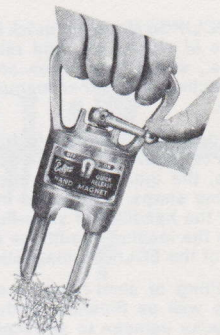
Method of Operation

As the lifting tackle elevates the quick lifter, it automatically picks up its load. It is similarly released after the load has been lowered on to its final location. In normal use the operator only has to control the lifting tackle, the functioning of the magnets being completely automatic.





Eclipse

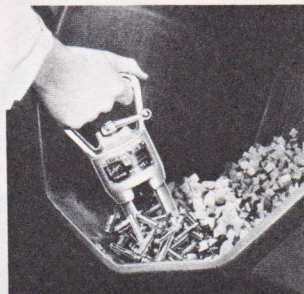


HAND MAGNET

The ECLIPSE Hand magnet can be used for the sorting and separating of steel parts, collecting of screws, nails and other small ferrous parts, retrieving of components from tanks and checking the efficiency of magnetic separating equipment to ensure that it does not allow iron material to pass over it and damage expensive machinery or contaminate materials, especially foodstuffs — one quick turn and it releases its load — an essential feature where a magnet is required which must be turned off.

Catalogue No.	Overall height in inches	Distance between poles in inches
930	8 ¹ / ₄	1 ¹ / ₄

Supplied with a pair of high density pole pieces.





PERMANENT MAGNETS

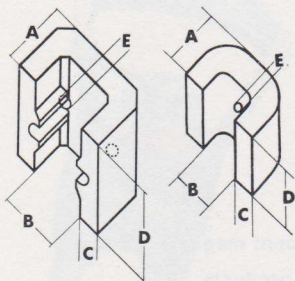
When, in 1915, the Company produced their first Permanent magnets, no one would have imagined today's widespread uses of those products.

Today, ECLIPSE Permanent magnets find wide and varied application in solving holding, attracting, and lifting problems. They find their way into the home, office, factory, garage and laboratory, and many of the uses are explained and illustrated in the appropriate ECLIPSE publications.

ECLIPSE Permanent magnets are made from standard magnet alloys which are called Alnico and Alcomax, and are produced in a wide range of standard types. They range in size from the small Pocket magnet to the much larger and considerably stronger magnets used in workholding and lifting equipment.

With over half a century of experience in the manufacture and application of magnets and magnetic workholding tools, ECLIPSE can justifiably claim to be the leading authority in this field.

To enable intending users of magnets to obtain the best results from ECLIPSE Permanent magnets, assistance and advice will gladly be given on request.



POWER MAGNET

Catalogue No.	Dimensions in inches				
	A	B	C	D	E
811	$\frac{3}{4}$	$\frac{9}{16}$	$\frac{5}{16}$	$\frac{3}{4}$	$\frac{5}{32}$
812	1	$\frac{3}{4}$	$\frac{3}{8}$	1	$\frac{3}{16}$
813	$1\frac{1}{8}$	$\frac{7}{8}$	$\frac{7}{16}$	$1\frac{1}{8}$	$\frac{3}{16}$
814	$1\frac{3}{8}$	$1\frac{3}{8}$	$\frac{7}{16}$	$1\frac{3}{4}$	$\frac{5}{16}$
815	$1\frac{1}{8}$	$1\frac{5}{8}$	$\frac{9}{16}$	$2\frac{1}{4}$	$\frac{5}{16}$
816	$2\frac{1}{8}$	$1\frac{7}{8}$	$\frac{5}{8}$	$3\frac{1}{4}$	$\frac{3}{8}$

HOLE CENTRES 814 $1\frac{1}{4}$ " 815 $1\frac{1}{2}$ " 816 $1\frac{1}{16}$ "

BAR MAGNET

Catalogue No.	Dimensions in inches		
	A	B	C
805	$\frac{1}{4}$ dia.	—	$\frac{13}{16}$
806	$\frac{5}{16}$ dia.	—	1
807	$\frac{3}{8}$ dia.	—	$1\frac{1}{16}$
844	$\frac{3}{8}$	$\frac{3}{16}$	$\frac{13}{16}$
845	$\frac{1}{2}$	$\frac{3}{16}$	$1\frac{1}{16}$
846	$\frac{3}{8}$	$\frac{3}{16}$	$2\frac{1}{16}$
842	$\frac{5}{8}$	$\frac{3}{8}$	2
843	$\frac{5}{8}$	$\frac{3}{8}$	3

POT MAGNET

Catalogue No.	Dimensions in inches		
	A	B	C
831	$\frac{5}{8}$	$\frac{11}{16}$	Tapped Hole OBA/6 SI or 10 NF
832	$\frac{3}{4}$	$\frac{13}{16}$	
833	1	$1\frac{1}{16}$	
834	$1\frac{1}{16}$	$1\frac{3}{8}$	

SHALLOW POT MAGNET

Catalogue No.	Dimensions in inches		
	A	B	C
826	$\frac{7}{16}$	$\frac{3}{4}$	$\frac{9}{64}$
827	$\frac{3}{8}$	$1\frac{1}{8}$	$\frac{3}{16}$
828	$\frac{7}{16}$	$1\frac{1}{2}$	$\frac{3}{16}$

Bar magnets are manufactured to metric dimensions and the equivalent dimensions in inches are given for reference only.

Technical information on ECLIPSE magnets is available on request.



POCKET MAGNET

Catalogue No.	Dimensions in inches			
No.	A	B	C	D
802	1	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{5}{16}$

MINOR MAGNET

Catalogue No.	Dimensions in inches			
No.	A	B	C	D
801	$\frac{7}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{16}$

BUTTON MAGNET

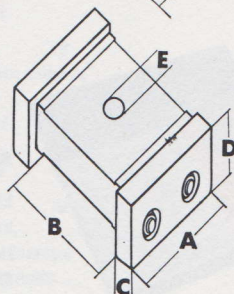
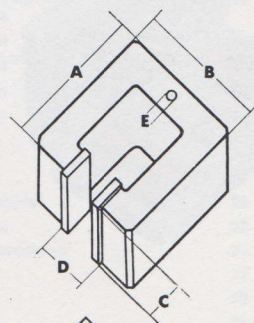
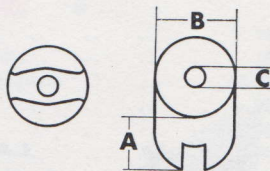
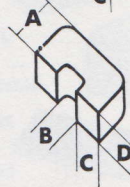
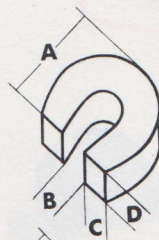
Catalogue No.	Dimensions in inches		
No.	A	B	C
821	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{1}{16}$
822	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{3}{16}$
823	$\frac{5}{8}$	1	$\frac{3}{16}$
824	1	$1\frac{1}{4}$	$\frac{1}{4}$

MAJOR MAGNET

Catalogue No.	Dimensions in inches				
No.	A	B	C	D	E
862	$4\frac{3}{8}$	$4\frac{1}{16}$	$2\frac{3}{16}$	$1\frac{1}{16}$	$\frac{1}{4}$

CLAMPING MAGNET

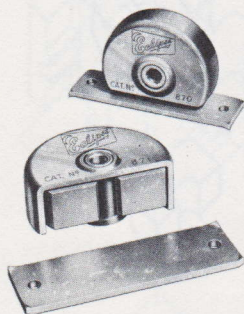
Catalogue No.	Dimensions in inches				
No.	A	B	C	D	E
937	$2\frac{5}{8}$	$2\frac{29}{32}$	$\frac{1}{2}$	$1\frac{1}{2}$	$\frac{13}{32}$





MAGNETIC DOOR CATCHES

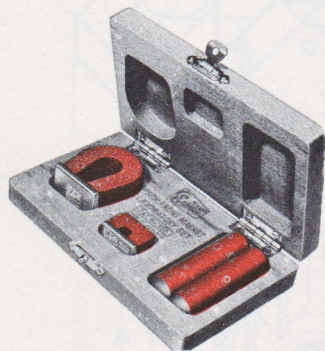
ECLIPSE magnetic door catches comprise a powerful permanent magnet, flexibly mounted in a neat silver-anodised aluminium housing. They are permanent in power and will not fatigue or fail, simple to fix and require no wood working alterations. There are no working parts to oil or service and the casing and plated keeper are rust-resistant. No. 870 is for small doors; No. 871 for larger hinged and sliding doors.



Catalogue No.	Height in inches	Width in inches	Depth in inches
870	$\frac{29}{32}$	$1\frac{3}{16}$	$\frac{25}{64}$
871	$\frac{63}{64}$	$1\frac{23}{64}$	$\frac{33}{64}$

LABORATORY SET

The ECLIPSE Laboratory set No. 850 with Alnico magnets is designed for schools, technical colleges, universities and all educational and other institutions for testing and demonstrating the magnetic properties of permanent magnets of different shapes and sizes. It is invaluable for plotting magnetic fields.



Type of magnet	Overall height in inches	Distance between poles in inches	Section in inches
Bar	—	2	$\frac{1}{2}$ dia.
Bridge	$\frac{1}{16}$	$\frac{1}{4}$	$\frac{5}{16} \times \frac{3}{16}$
Horseshoe	$1\frac{3}{8}$	$\frac{5}{16}$	$\frac{3}{8} \times \frac{3}{8}$

MAGNETIC STRIP

ECLIPSE Magnetic strip No. 880 is a new and different material for almost limitless uses. It looks like cab-tire cable, is soft and is sufficiently flexible to bend into a 3" diameter circle. It can be cut with a knife, and can be drilled. Dividing the strip does not damage the magnetic performance. Short lengths can be butted together when mounting. For sticking the strip, an adhesive suitable for plastic materials is recommended. Approx. size $\frac{3}{8}$ " wide by $\frac{1}{64}$ " thick.





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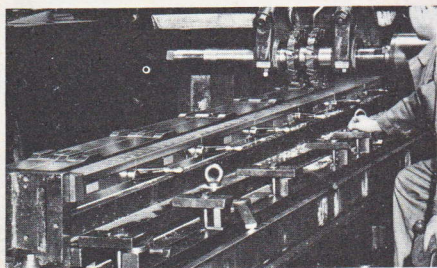
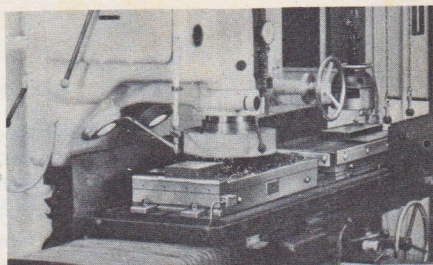
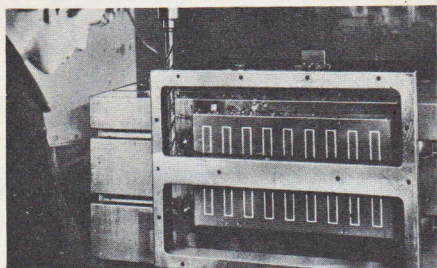
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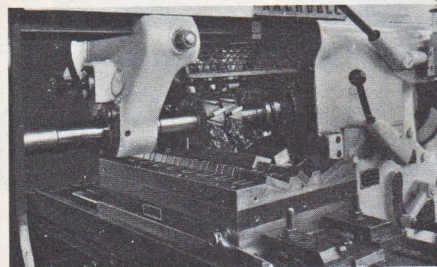
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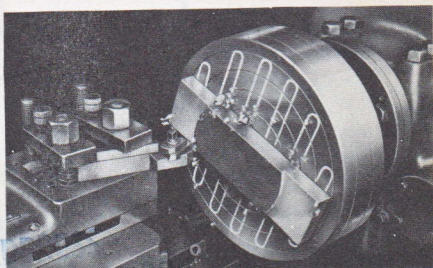
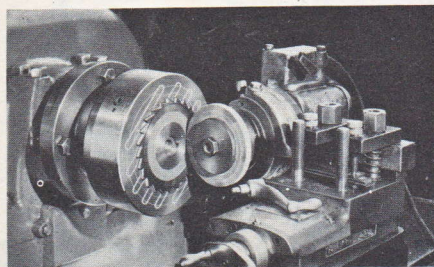
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In addition to the tools described in this catalogue **ECLIPSE** also manufacture **Permanent Magnet Chucks and Accessories, and Permanent-Electro Magnetic Chucks**



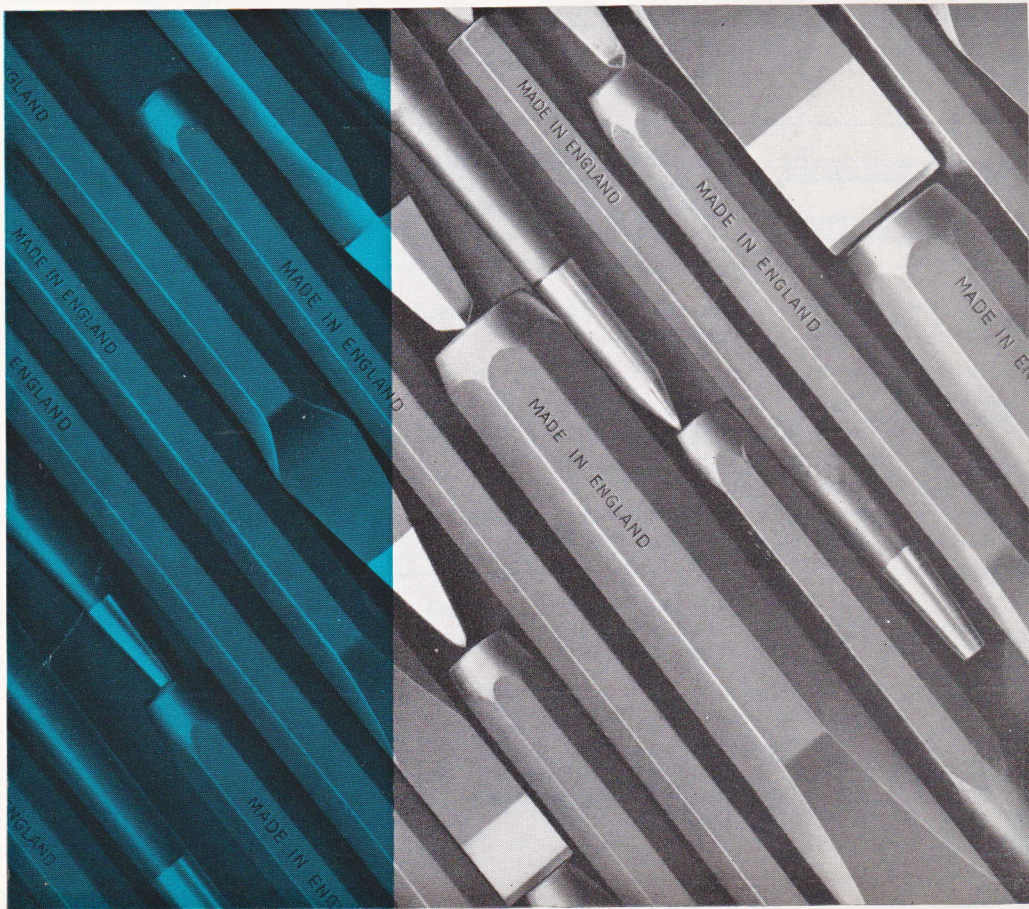
Full information in separate publications is available on request



GEORGE W. SANDERS CO.
MAILING ADDRESS: P. O. BOX 1221
GLENDALE, CALIFORNIA 91201
PHONE: 587-4101 AREA CODE 213



COLD CHISELS



ECLIPSE cast steel cold chisels are manufactured on sophisticated new equipment which ensures that all chisels produced have a consistently high quality. They are produced from high quality Sheffield steel and are designed to have the toughness and cutting ability required of this type of tool.

All ECLIPSE chisels are finished in an attractive matt black and have a distinctive ECLIPSE transfer in orange and black.

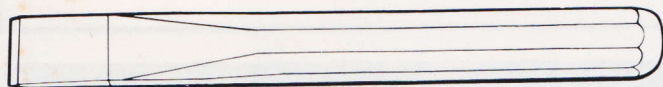
In addition to the chisels listed, pipe caulking tools, dooking chisels, mason's chisels, case openers and other specialised chisels can also be supplied to order.



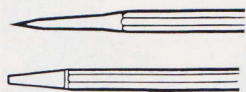
COLD CHISELS

FLAT CHISELS

The most popular chisel for general work on metals in engineering workshops, foundries, etc.



Blade Width	Length			
$\frac{1}{4}$ "	4"	6"		
$\frac{3}{8}$ "	4"	5"	6"	8"
$\frac{1}{2}$ "	6"	8"	10"	12"
$\frac{3}{4}$ "	6"	7"	8"	9"
$\frac{1}{2}$ "	10"	12"	14"	18"
$\frac{3}{4}$ "	6"	8"	9"	10"
$\frac{7}{8}$ "	12"	14"	18"	24"
1"	8"	9"	10"	12"
	14"	18"	24"	



CORRUGATED IRON PUNCH

For punching holes in corrugated sheets.

MOTOR AND REAPER PUNCH

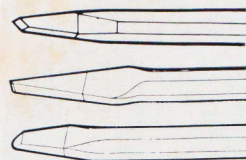
For knocking out shafts in bearings, etc.

Oct.	Length
$\frac{3}{8}$ "	6"
$\frac{1}{2}$ "	6"



CONCRETE POINT. A pointed chisel for breaking up concrete.

Oct.	Length
$\frac{5}{8}$ "	10"
$\frac{3}{4}$ "	12"
1"	12"



DIAMOND POINT. For cutting metal in corners and in awkward places where other types of chisel are unsuitable.

CROSSCUT. For cutting slots in key-ways, etc.

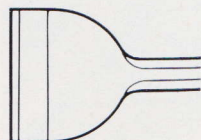
HALF ROUND. Generally used for cutting oil-ways in bearings and shafts.

Oct.	Length
$\frac{1}{4}$ "	4"
$\frac{3}{8}$ "	5"
$\frac{1}{2}$ "	6"
$\frac{5}{8}$ "	7"
$\frac{3}{4}$ "	8"
1"	10"



PLUGGING CHISELS. For cutting slots in brick-work which has to be plugged with wooden wedges to hold wall fixtures, etc.

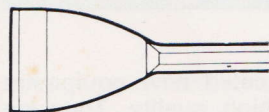
Oct.	Length
$\frac{5}{8}$ " (fluted)	10"
$\frac{3}{4}$ " (plain)	10"



BRICK BOLSTERS

For cutting bricks—the brick is "nicked" all round with the cutting edge of the Bolster Chisel and then tapped with a hammer.

Blade	Length
3"	9"
$3\frac{1}{2}$ "	9"
4"	8"
4"	9"
4"	10"
$4\frac{1}{2}$ "	10"



FLOORBOARD CHISELS. Principally used by tradesmen for cutting the tongue from floorboarding before lifting to obtain access to services.

Blade	Length
$21\frac{1}{2}$ "	9"
$21\frac{1}{2}$ "	9"



WRECKING BARS. For opening packing cases, dismantling wooden crates, etc.

Oct.	Length			
$\frac{1}{2}$ "	12"			
$\frac{3}{4}$ "	18"			
$1\frac{1}{4}$ "	18"	24"	30"	36"